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**QUARTERLY MONITORING REPORT  
ACTIVE TREATMENT SYSTEMS  
THIRD QUARTER 2009**

**AMERICAN CHEMICAL SERVICE NPL SITE  
GRIFFITH, INDIANA**

**MWH File No. 4050577**

**Prepared For:**

**American Chemical Service NPL Site RD/RA Executive Committee  
Griffith, Indiana**

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**February 2010**

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## ACRONYMS AND ABBREVIATIONS

ACS	American Chemical Service, Inc.
AMSL	Above Mean Sea Level
AS	Air Sparge
BOD	Biological Oxygen Demand
BW	Barrier Wall
BWES	Barrier Wall Extraction System
cfm	cubic feet per minute
DL	Detection Limit
DPE	Dual Phase Extraction
GAC	Granular Activated Carbon
Global	Global Technologies
GWTP	Groundwater Treatment Plant
"Hg	Inches of mercury
"H <sub>2</sub> O	Inches of water
IDEM	Indiana Department of Environmental Management
ISVE	In-situ Soil Vapor Extraction
K-P	Kapica Pazmey
lb/day	Pounds per day
lb/hr	Pounds per hour
LDC	Laboratory Data Consultants
mg/kg	Milligrams per kilogram
mg/L	Milligrams per liter
MWH	MWH Americas, Inc.
NC	Not Calculated
ND	Not Detected
NE	No Effluent Limit Established
NPL	National Priorities List
NS	Not Sampled
OFCA	Off-Site Containment Area
PCBs	Polychlorinated Biphenyls
PID	Photoionization Detector
PGCS	Perimeter Groundwater Containment System
ppm	Parts per million
PSVP	Performance Standard Verification Plan
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
SBPA	Still Bottoms Pond Area
SVOCs	Semi-Volatile Organic Compounds
T-102	Aeration Equalization Tank (Tank – 102)
Therm Ox 1	Thermal Oxidizer/Scrubber Unit 1
Therm Ox 2	Thermal Oxidizer/Scrubber Unit 2
TOC	Top of Casing
TOIC	Top of Inner Casing

TOSG	Top of Staff Gauge
TSS	Total Suspended Solids
$\mu\text{g}$	Micrograms
$\mu\text{g/kg}$	Micrograms per kilogram
$\mu\text{g/L}$	Micrograms per liter
U.S. EPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

## **1.0 INTRODUCTION**

MWH Americas, Inc. (MWH), on behalf of the American Chemical Service (ACS) Executive Committee, started up the on-site groundwater treatment system at the ACS National Priorities List (NPL) Site (ACS Site) in Griffith, Indiana on March 13, 1997. The groundwater treatment plant (GWTP) system was designed to treat groundwater from the Perimeter Groundwater Containment System (PGCS) and the Barrier Wall Extraction System (BWES). The original treatment consisted of a phase-separator for oil and free product removal, equalization tanks, a UV oxidation unit for destruction of organic constituents, and an air stripper to remove methylene chloride and other organics. The treatment also included a chemical precipitation and clarification unit to remove metals, a sand filter to remove suspended solids, and activated carbon vessels for final polishing of the treated groundwater before it was released to the west of the Site.

In 2001, an activated sludge treatment unit was added to the process to reduce the volatile and semivolatile organic compounds (VOCs and SVOCs) in the collected groundwater. The activated sludge treatment process also reduces the amount of activated carbon required to treat the water. An aerated equalization tank was also added to the GWTP in 2001 to remove VOCs from the collected groundwater, oxidize metals to increase metals removal efficiency in the chemical precipitation unit, and equalize groundwater flow through the GWTP. The activated sludge system and aeration tank have been fully integrated into the process along with the other upgrade components. Startup and optimization of the catalytic oxidizer/scrubber air treatment unit was also conducted during 2001.

The treated effluent from the treatment system is discharged to the nearby wetlands, west of the treatment system, in accordance with Agency approvals.

Operation of the In-situ Soil Vapor Extraction (ISVE) system for the Off-Site Containment Area (OFCA) and the Kapica-Pazmey (K-P) Area began on May 1, 2002. Operation of the ISVE system for the Still Bottoms Pond Area (SBPA) began in July 2003. The ISVE systems were designed to remove volatile and semi-volatile compounds from the subsurface media.

The Off-Site Area ISVE system consists of 42 ISVE wells, 3 air sparge wells, ISVE and air sparge blower systems, a thermal oxidizer/scrubber unit, and the associated mechanical and electrical components. Protocols and goals for the phased startup of the Off-Site System were followed as defined in the Final Remedy (Montgomery Watson, 1999). In 2004, an additional blower unit was added to the Off-Site Area ISVE system to more effectively meet the design objectives of the system. The additional blower increased the capacity of the Off-Site ISVE system from 1,000 to 2,000 cubic feet per minute (cfm).

The SBPA ISVE system consists of 25 ISVE wells, 21 dual-phase extraction (DPE) wells, 6 air sparge wells, ISVE and air sparge blower systems, a thermal oxidizer/scrubber unit, and the associated mechanical and electrical components. During the first 12 months of system operation, the performance of the ISVE system was evaluated. Based on this evaluation, the

SBPA ISVE system was enhanced in accordance with the United States Environmental Protection Agency (U.S. EPA) and Indiana Department of Environmental Management (IDEM) approval by reconfiguring 18 of the ISVE wells to allow periodic injection of air. Air for the injection wells is directed from blower ME-102/103 at the GWTP to the SBPA ISVE blower shed. The air injection system, which consists of three groups of five injection wells, began operation in December 2005. The air injection wells were previously rotated among the three well groups on a monthly basis with only one well group operating at a time. On July 15, 2009 all of the SBPA ISVE wells began operating in extraction mode, and the use of air injection was discontinued. This configuration is being used to provide baseline measurements for VOC removal prior to implementing alternate well configurations.

This report summarizes GWTP effluent analytical data and thermal oxidizer off-gas analytical data, ISVE process monitoring data, and water level gauging data collected from July 2009 through September 2009 (third quarter 2009). The report also details modifications and upgrades that were made to the active treatment systems during the reporting period.

## 2.0 GWTP COMPLIANCE MONITORING

### 2.1 SAMPLING REQUIREMENTS

Effluent samples are collected on a regular schedule from the treatment system to demonstrate compliance with the discharge limits (**Table 2.1**) established by IDEM and the U.S. EPA. The approved Performance Standard Verification Plan for the PGCS (PSVP) (Montgomery Watson, July 1997) requires quarterly effluent sampling for biochemical oxygen demand (BOD), total suspended solids (TSS), SVOCs, metals, and polychlorinated biphenyls (PCBs) in the system, and monthly effluent sampling for pH and VOCs, as tabulated below. In accordance with the PSVP, a full analysis effluent compliance sample was collected during July 2009 and analyzed for all of the analytes listed above. During August and September 2009, the monthly effluent compliance samples were analyzed for VOCs and pH only, also in accordance with the PSVP.

Sampling and analyses were performed in accordance with the approved Quality Assurance Project Plan (QAPP) (Montgomery Watson Harza, November 2001) and Addendum No. 1 to the QAPP (MWH, April 2007) during the reporting period. Quality control measures were also instituted in accordance with the PSVP. The following table and paragraphs present details on sampling and analyses and also summarize the analytical data for the treatment system effluent.

**Sampling Frequency Schedule – Groundwater Treatment System**

Analytes	Cumulative Time From Startup*	Frequency
Flowrate	–	Continuous
BOD, TSS, SVOCs and Metals	181 days onward	Once per quarter
VOCs and pH	31 days onward	Once per month
PCBs	181 days onward	Once per quarter
PCBs in Sediment (one location)	–	Once per year

\*Note: System operation began on March 13, 1997

### 2.2 EFFLUENT SAMPLING AND ANALYSES

Effluent samples were collected each month during the third quarter of 2009. Samples were collected on the following dates and analyzed for the listed analytes for this reporting period:

July 13, 2009	Full analysis (pH, TSS, BOD, Metals, VOCs, SVOCs, pentachlorophenol, and PCBs)
August 13, 2009	pH and VOCs
September 10, 2009	pH and VOCs

The above samples were collected directly from a sampling port on the effluent line of the treatment system. The samples were placed in contaminant-free containers, in accordance with the *U.S. EPA Specifications and Guidance for Obtaining Contaminant-Free Sample Containers* (U.S. EPA, 1992). Appropriate sample containers and preservatives, as specified in the QAPP, were used to collect and preserve the samples. Following sample collection, the temperature of the sample containers was maintained at or below 4° C in coolers. Chain-of-Custody forms were prepared to track the transfer of samples from the treatment system to the laboratories. In accordance with the approved QAPP, the effluent water samples were analyzed for the following parameters by the following analytical methods:

<u>Parameter</u>	<u>Analytical Method</u>
VOCs	SW-846 8260B
SVOCs	SW-846 8270C
Pentachlorophenol	SW-846 8270C and SIM
Pesticides/PCBs	EPA 608/SW-846 8081/8082
Metals (Excluding Mercury)	
General Water Quality	SW-846 6010
Parameters (TSS and BOD-5)	EPA 160.2 and 405.1
Mercury	SW-846 7470
pH	EPA 150.1

## 2.3 EFFLUENT ANALYTICAL RESULTS

### 2.3.1 GWTP Effluent Samples

The GWTP effluent monitoring data summarized in [Table 2.2](#), verify that the system effluent was compliant with the discharge limits summarized in [Table 2.1](#). No effluent exceedences were reported in the July, August, or September samples.

Microbac Laboratory of Merrillville, Indiana performed the analysis of the samples. Laboratory Data Consultants (LDC) of Carlsbad, California performed third party data validation in accordance with the U.S. EPA National Functional Guidelines for Organic/Inorganic Data Review (U.S. EPA, February 1994 and October 1999). Validation qualifiers are listed in [Table 2.2](#) and are written in the margin of the analytical data sheets provided in [Appendix A](#).

## 3.0 ISVE SYSTEM MONITORING

### 3.1 THERMAL OXIDIZER OFF-GAS SAMPLING

During the third quarter of 2009, Thermal Oxidizer/Scrubber Unit 1 (Therm Ox 1) was used to treat vapors from the SBPA ISVE system and Thermal Oxidizer/Scrubber Unit 2 (Therm Ox 2) was used to treat vapors from the Off-Site ISVE system and T-102. Monthly VOC removal rates are illustrated in [Figure 3.1](#) and the total VOCs removed are shown on [Figure 3.2](#). Compliance samples were collected from the thermal oxidizer/scrubber units on July 9th, August 6th, and September 10th.

Influent and effluent off-gas samples were collected directly from sampling ports on the influent pipe to the thermal oxidizer and the discharge stack of the scrubber. One influent sample and one effluent sample were collected. A duplicate influent sample was also collected. The samples were collected to comply with the PSVP for (Montgomery Watson, June 1999) and QAPP and in accordance with laboratory guidelines. The VOC samples were collected using a Summa canister and the SVOC samples were collected in sorbent tubes.

#### Sampling Frequency Schedule – ISVE System

Startup	Weekly for a four week period
Post-Startup	Monthly in accordance with the IDEM Air Permit Equivalency

Following sample collection, the sorbent tubes were placed in coolers and maintained at or below 4°C for shipment. Chain-of-Custody forms were prepared to track the transfer of samples from the treatment plant to the laboratories for extraction and analysis. In accordance with the approved QAPP and addenda, the off-gas samples were analyzed by the following analytical methods:

<u>Parameter</u>	<u>Analytical Method</u>
VOCs	TO-15
SVOCs	TO-13

Per Addendum No. 1 to the QAPP (MWH, April 2007), Microbac Laboratory of Merrillville, Indiana is now the primary analytical laboratory for air analyses for the project. Microbac performs VOC analysis by Method TO-15.

### 3.2 SAMPLING RESULTS

The influent and effluent off-gas data are collected to verify that the off-gas from both of the thermal oxidizers was less than the IDEM discharge limit of three pounds of VOCs per hour (lbs/hr) and 15 pounds per day (lbs/day) for July, August, and September. The highest VOC discharge rate observed during these sampling events was the September 10, 2009 Therm Ox 2 sample, which was measured at 0.159 pounds per hour or 3.82 pounds per day. Both of

these rates are below the corresponding discharge limits. Therefore, it can be concluded that the ISVE systems are performing well within discharge limits for air emissions.

VOC discharge values for Therm Ox 1, Therm Ox 2, and the SBPA and Off-Site ISVE system are presented in [Tables 3.1 through 3.9](#). The analytical data sheets for the compliance samples are provided in [Appendix B](#). In addition to the off-gas data collected during the third quarter, MWH collected off-gas samples from the Off-Site ISVE system and the SBPA ISVE system influent lines. These samples were collected in order to comply with the PSVP.

Microbac Laboratory of Merrillville, Indiana analyzed all of the vapor samples. The analytical results are summarized in [Tables 3.1 through 3.18](#). Laboratory Data Consultants (LDC) of Carlsbad, California performed third party data validation in accordance with the QAPP and the National Functional Guidelines for Organic/Inorganic Data Review. Validation qualifiers are listed in the tables and are written in the margin of the analytical data sheets provided in [Appendix B](#).

### **3.3 ISVE SYSTEM MONITORING**

Performance monitoring of the ISVE system was conducted in accordance with the PSVP. Extracted vapor flow rates and vacuum pressures at individual ISVE wells and headers were measured and recorded on a routine basis. Additionally, VOC concentrations were measured at individual wells and headers using a photoionization detector (PID).

The information collected during performance monitoring is used to evaluate and optimize the ISVE system. Data collected from the Off-Site ISVE system during the third quarter of 2009 are presented in [Tables 3.19 and 3.20](#). Data that were collected from the SBPA ISVE system during the third quarter of 2009 are presented in [Tables 3.21 and 3.22](#).

### **3.4 PRODUCT REMOVAL ACTIVITIES**

MWH performed product removal activities on a weekly to bi-weekly basis during the third quarter of 2009 from wells in the Off-Site Area with measureable product. Product was also removed from target wells in the SBPA area (SVE-52, SVE-53, SVE-61, SVE-62, SVE-72, SVE-81, SVE-82, and SVE-88) on September 3, 2009. Product removal is performed using a large vacuum hose which transfers the free product to 55-gallon steel drums. Approximately 250 gallons of product were removed from Off-Site wells and 20 gallons of product were removed from SBPA wells during the third quarter of 2009. The drums of product are stored at the Site until arrangements are made for their proper disposal. MWH shipped nine drums of free product off site in May 2009 and 14 drums of free product off site in August 2009 to be disposed of as hazardous waste. MWH will continue to properly dispose of the free product within 90 days of being generated.

## **4.0 GWTP PROCESS MODIFICATIONS AND REPAIRS**

### **4.1 GWTP PROCESS MODIFICATIONS**

No modifications were made to the GWTP during the third quarter of 2009.

### **4.2 GWTP REPAIRS AND MAINTENANCE**

The following maintenance activities were conducted at the GWTP during the third quarter of 2009:

- The annual GWTP maintenance event was conducted in September 2009. During this event, additional maintenance was performed on the activated sludge plant (biotank). Excess sludge was removed from the unit and a new mixture of nutrients and microorganisms was prepared.
- MWH performed a change-out of the carbon at the GWTP on September 3, 2009.

## **5.0 ISVE PROCESS MODIFICATIONS AND REPAIRS**

### **5.1 ISVE PROCESS MODIFICATIONS**

The following modification was made to the SBPA ISVE system during the third quarter of 2009:

- On July 15, 2009, all SBPA ISVE wells began operating in extraction mode. This configuration is being used to provide baseline measurements for VOC removal prior to implementing alternate well configurations.

No modifications were made to the Off-Site ISVE system during the third quarter of 2009.

### **5.2 ISVE REPAIRS AND MAINTENANCE**

The following maintenance activities were conducted on the ISVE systems during the third quarter of 2009:

- On July 13 and 14, 2009, SVE wells in both the SBPA and Off-Site areas were pressure washed at 2,000 psi. Each well was vacuumed out after cleaning. Approximately 1,500 gallons of liquid was vacuumed out of the SVE wells and transferred to the GWTP for treatment.
- Minor maintenance to the SBPA asphalt engineered cover was conducted in August. The event was conducted as part of the warranty terms for the cover. Activities included sealing of small surface cracks that had formed since the original installation in 2003.

## 6.0 PGCS AND BWES GAUGING ACTIVITIES

During the operational time frame of the GWTP in the third quarter of 2009, the PGCS groundwater extraction trenches were operated in “auto” mode. In “auto” mode, the PGCS extraction wells pump continuously unless there is a low water level in individual extraction wells or a high water level in the Aeration Equalization Tank (T-102). This mode is used to control the flowrate through the treatment system, while at the same time creating an inward gradient along the PGCS trench. The GWTP also received influent from the On-Site and Off-Site components of the BWES, the SBPA DPE wells, MW-10C, MW-56, and the Lower Aquifer Pumping System during the third quarter of 2009.

In accordance with the PSVP, a discussion on the effect of the PGCS and BWES on the water table near the Site is presented in each quarterly monitoring report. This section summarizes the groundwater elevations at the Site during July, August, and September 2009. Groundwater elevation measurements were collected throughout the Site on September 22, 2009 as part of the groundwater monitoring program. The groundwater elevations are listed in **Table 6.1** and the resulting water table contours outside the barrier wall based on these measurements are shown on **Figure 6.1**.

The barrier wall was constructed in 1997 to contain the contaminated zone under the Site and the BWES was installed to extract groundwater from within the barrier wall and dewater the Site for the ISVE system. Nine pairs of piezometers were installed, with one piezometer of each pair on either side of the barrier wall, spaced along the barrier wall alignment. This allows measurement and tracking of water levels in order to document that the barrier wall is serving its designed function.

**Table 6.1**, Water Table Elevations Across the Barrier Wall and Near the PGCS, presents the groundwater elevations inside and outside the barrier wall as measured on September 22, 2009. The groundwater elevations are plotted on **Figure 6.2**. All of the piezometer pairs, with the exception of P93R/P94R, indicated lower groundwater elevations inside the barrier wall than those outside the barrier wall. At piezometer pair P93R/P94R, the groundwater elevation inside the barrier wall was slightly higher than the groundwater elevation outside the barrier wall (1.69 feet). The higher groundwater elevations at this location in September 2009 are likely due to reduced operation time of the BWES as a result of the annual maintenance event being conducted at the GWTP. Historical measurements at this location typically show lower groundwater elevations inside the barrier wall. The other piezometer pairs showed groundwater elevations between 0.22 and 6.12 feet lower inside the barrier wall. In general, the data demonstrates that the barrier wall is successfully performing the intended function of isolating and protecting the groundwater outside the barrier wall from the source areas of the Site inside the barrier wall. MWH will continue to collect water level measurements quarterly across the Site as required in the PSVP. In addition, quarterly water level measurements will continue to be collected at piezometer pair P93R/P94R to see if the higher groundwater elevations outside the barrier wall at this location continue.

As part of the optimization of the GWTP and BWES upgrades, MWH began active dewatering of the Off-Site Area through increased groundwater pumping rates on September 25, 2001. Active dewatering of the SBPA (On-Site Area) was enhanced on February 11, 2003 with the addition of the DPE wells. Water levels were measured throughout the quarter at piezometer locations (P29, P31, P32, P36, and P49) in the On-Site Area and at piezometers (P96, P110, P112, P113, P114, P116, P118) and three air sparge (AS) wells (AS-7, AS-8, and AS-9) in the Off-Site Area. These locations are shown on **Figure 6.3**. The water level trend data from these piezometers and AS wells for the third quarter of 2009 are depicted graphically on **Figures 6.4** and **6.5**, which also show the target water elevations for each area. In the SBPA, the target water level is 629 feet amsl. Water levels in two piezometer locations (P-29 and P-31) have been drawn down to below the bottom of the screens in these wells throughout the third quarter of 2009. Therefore, the depth to water measurements at these locations show straight-line measurements of the bottom of the wells. The other locations had water levels that varied from approximately 626 feet amsl to 632 feet amsl. Water levels in the SBPA area showed a relatively stable trend throughout the third quarter of 2009.

In the Off-Site ISVE area, the target water level is 626 feet amsl. Actual water levels varied from approximately 621 feet amsl to 629 feet amsl. Water levels in the Off-Site area showed a relatively stable trend throughout the third quarter of 2009.

MWH will continue to monitor the water levels in both the SBPA and Off-Site Area.

## **7.0 SYSTEM OPERATION**

The GWTP was operational 93 percent of the time during the third quarter of 2009 (based on 2,345 hours of operation out of a total of 2,520 hours). The system drew influent water from the On-Site Area BWES, the Off-Site Area BWES, the PGCS, MW-10C, MW-56, and the Lower Aquifer Pumping System.

The Off-Site Area ISVE system operated as designed 84 percent of the third quarter of 2009 (based on 2,119 hours of operation out of a total of 2,520 hours). The SBPA ISVE system operated as designed 68 percent of the third quarter of 2009 (based on 1,719 hours of operation out of a total of 2,520 hours). The majority of the downtime for the ISVE systems was associated with liquid removal activities and maintenance of the thermal oxidizers.

## **8.0 CONCLUSIONS AND RECOMMENDATIONS**

This section provides a summary of the operational status of the active remedial systems at the ACS NPL site for the subject period. Anticipated activities for the upcoming quarter and recommendations for system modifications are also provided.

### **8.1 GWTP OPERATION**

The GWTP continued to operate normally during the third quarter of 2009. During this time period, MWH conducted the annual maintenance event at the GWTP. In addition, MWH conducted a change-out of the carbon at the GWTP.

The GWTP continued to treat water from all available sources. The list of sources was expanded in September 2007 with the completion of the Lower Aquifer Pumping System and the replacement of the pump in MW-10C.

### **8.2 ISVE OPERATION**

The ISVE systems continued to operate normally during the third quarter of 2009. The operational time of both systems was less than 100% primarily as a result of liquid removal activities and maintenance activities conducted on the thermal oxidizers. MWH will continue to perform O&M services on the thermal oxidizer units to ensure adequate operational time for the ISVE systems. As shown in [Figure 3.1](#), the VOC removal rates (in pounds per day) were observed to be within the range previously observed.

While performance data for the ISVE systems indicates that the systems continue to be effective in treating the vadose zone soils, the data also suggests that the systems could be operated more efficiently. As the remediation has progressed, mass removal rates at some wells have become limited while rates remain higher at other locations. Going forward, MWH will make minor modifications to the operational settings under which the systems operate. Actions will be taken to achieve similar or greater VOC removal rates, often at lower costs through reduced energy usage. The goal of alternate configurations would be to achieve one or more of the following objectives:

- To maximize VOC mass removal rates from the target areas;
- To concentrate the operation of the system on wells that are indicating higher levels of VOC concentrations (hot spots);
- To reduce energy (electrical and natural gas) usage rates while maintaining overall system performance;
- To reduce the carbon footprint of the active treatment systems;
- To reduce wear on existing equipment.

Alternate system configurations include, but are not limited to:

For the Off-Site System:

1. Pulsing system operation to allow concentrations of VOCs in the subsurface to rebound during “off” cycles, maximizing efficiency during “on” cycles.
2. Shutting down one of the two vacuum extraction blowers and concentrating operation on a reduced number of ISVE wells, excluding wells that are shown to produce lower levels of VOC concentrations.
3. Removing the caps from selected wells while vacuum is not being applied to them to promote increased air flow through the vadose zone soils from the opened wells to adjacent active extraction wells. Removing well caps will not result in the release of VOCs since active soil vapor extraction maintains a negative pressure.
4. Combining the extracted vapor stream with the SBPA system in order to use only one thermal oxidizer system.

For the SBPA System:

1. Pulsing system operation to allow concentrations of VOCs in the subsurface to rebound during “off” cycles, maximizing efficiency during “on” cycles.
2. Concentrating operation of the extraction system to a reduced number of ISVE wells, excluding wells that are shown to produce lower levels of VOC concentrations.
3. Removing the caps from selected wells while vacuum is not being applied to them to promote increased air flow through the vadose zone soils from the opened wells to adjacent active extraction wells. Removing well caps will not result in the release of VOCs since active soil vapor extraction maintains a negative pressure.
4. Discontinuing the air injection regime at ISVE wells configured to allow injection of air.
5. Reducing the overall extraction flow rate.

The configurations listed above are not meant to be comprehensive but represent the types of modifications that MWH may take to improve system efficiency. From time to time, other actions not identified above may be taken to achieve the same objectives. All of the potential actions would be taken in order to accomplish remedial objectives and milestones established by the Record of Decision (ROD). Each temporary modification will be documented in the system log and will be available for inspection by the Agencies at the Site.

On July 15, 2009, all ISVE wells began operating in extraction mode. This configuration is being used to provide baseline measurements for VOC removal prior to implementing the alternate configurations listed above.

### **8.3 GROUNDWATER LEVEL MONITORING**

As indicated in Section 6.0, the groundwater extraction system continues to successfully perform its intended function of isolating and protecting the groundwater outside the barrier wall from the source areas of the Site inside the barrier wall. One piezometer pair, (P93R/P94R) indicated higher groundwater levels inside the barrier wall in September 2009. These higher groundwater elevations are likely the result of decreased operation time of the BWES due to the annual maintenance event being conducted at the GWTP. Historical measurements at this location typically show an inward gradient. MWH will continue to monitor the water elevations at this location on a quarterly basis in accordance with the PSVP. All of the other piezometer pairs indicated an inward gradient along the barrier wall.

MWH continues to perform liquid removal activities in order to decrease water levels in wells that have risen above the target level. Throughout the third quarter of 2009, liquid was pumped from Off-Site Area wells that had high water levels or free product levels on a weekly to bi-weekly basis. In addition, MWH performed liquid removal from target wells in the SBPA Area on September 3, 2009. See [Section 3.4](#) for specific details.

### **8.4 HEALTH AND SAFETY**

No health and safety incidents were reported at the Site during the third quarter of 2009. MWH continues to perform site activities in accordance with the site Health and Safety Plan and all applicable addendums.

Health and Safety statistics for the ACS Site as of September 30, 2009 are:

- 4,512 consecutive days with no lost time due to an accident or Health and Safety incident.
- 2,204 consecutive days without an incident requiring first aid.

## **9.0 REFERENCES**

1. *Final Remedial Design Report: Final Remedy, ACS NPL Site*, Montgomery Watson, August 1999.
2. *Performance Standard Verification Plan, ACS NPL Site*, Montgomery Watson, July 1997.
3. *Performance Standard Verification Plan, ACS NPL Site*, Montgomery Watson, June 1999.
4. *Phase I Technical Memorandum Wetland Investigation, ACS NPL Site*, Montgomery Watson, July 1996.
5. *Phase II Technical Memorandum Wetland Investigation, ACS NPL Site*, Montgomery Watson, February 1997.
6. *Quality Assurance Project Plan, ACS NPL Site*, Montgomery Harza, March 2001.
7. *Quality Assurance Project Plan, Addendum No. 1, ACS NPL Site*, MWH, April 2007.
8. *U.S. EPA Specifications and Guidance for Obtaining Contaminant-Free Sample Containers*, United States Environmental Protection Agency, 1992.
9. *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, U.S. EPA, February 1994.
10. *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, U.S. EPA, October 1999.

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## **TABLES**

**Table 2.1**  
**Groundwater Treatment System Effluent Discharge Limits**  
**American Chemical Service NPL Site**  
**Griffith, Indiana**

Groundwater Quality Parameter	Effluent Standard (Limit)
<i>General Water Quality Parameters</i>	
pH	6 - 9 S.U.
BOD-5	30 mg/L
TSS	30 mg/L
<i>Inorganics</i>	
Arsenic	50 µg/L
Beryllium	NE
Cadmium	4.1 µg/L
Manganese	NE
Mercury <sup>1</sup>	0.02 µg/L (w/DL = 0.64)
Selenium	8.2 µg/L
Thallium	NE
Zinc	411 µg/L
<i>Volatile Organics</i>	
Acetone	6,800 µg/L
Benzene	5 µg/L
2-Butanone	210 µg/L
Chloromethane	NE
1,4 – Dichlorobenzene	NE
1,1 – Dichloroethane	NE
1,2 – Dichloroethene – cis	70 µg/L
Ethylbenzene	34 µg/L
Methylene chloride	5 µg/L
Tetrachloroethene	5 µg/L
Trichloroethene	5 µg/L
Vinyl chloride	2 µg/L
4 – Methyl - 2 – pentanone	15 µg/L
<i>Semi-Volatile Organics</i>	
bis(2 – Chloroethyl) ether	9.6 µg/L
bis(2 – Ethylhexyl) phthalate	6 µg/L
Isophorone	50 µg/L
4 – Methylphenol	34 µg/L
Pentachlorophenol	1 µg/L
<i>PCBs</i>	
PCBs <sup>1</sup>	0.00056 µg/L (w/DL = 0.1 to 0.9)

**Notes:**

1. Effluent standards for the Groundwater Treatment Plant were established based on maximum contaminant levels, Indiana water quality effluent limits, or best available treatment technologies. However, laboratory equipment could not read down to the effluent standards for mercury or PCBs. Therefore, the lowest equipment detection limit (or limit range for PCBs) for these compounds were established as their respective effluent standards.

NE = No effluent limit established.

DL = Detection limit

S.U. = Standard pH units

µg/L - micrograms per Liter

**Table 2.2**  
**Summary of Effluent Analytical Results - Third Quarter 2009**  
**Groundwater Treatment System**  
**American Chemical Service NPL Site**  
**Griffith, Indiana**

Event Date	Month 146 7/13/2009	Month 147 8/13/2009	Month 148 9/10/2009	Effluent Limits	Lab Reporting Limits
pH	7.38 H/	7.13 H/	8.13 H/	6-9	none
TSS	1.0 U/	NS	NS	30	1.0
BOD	2.0 U/	NS	NS	30	2
Arsenic	10 U/	NS	NS	50	10
Beryllium	1.0 U/	NS	NS	NE	1.0
Cadmium	2.0 U/	NS	NS	4.1	2.0
Manganese	30 /	NS	NS	NE	2.0
Mercury <sup>1</sup>	0.2 U/	NS	NS	0.02 (w/DL = 0.64)	0.2
Selenium	30 U/	NS	NS	8.2	30
Thallium	50 U/	NS	NS	NE	50
Zinc	20 U/	NS	NS	411	20
Benzene	1.0 U/	1.0 U/	1.0 U/	5	1.0
Acetone	5.0 U/	5.0 U/	3.0 J/	6,800	5.0
2-Butanone	2.0 U/UJ	2.0 U/	2.0 U/	210	2.0
Chloromethane	2.0 U/UJ	2.0 U/	2.0 U/	NE	2.0
1,4-Dichlorobenzene	1.0 U/	1.0 U/	1.0 U/	NE	1.0
1,1-Dichloroethane	3.1 /	4.9 /	1.0 U/	NE	1.0
cis-1,2-Dichloroethylene	28 /	27 /	1.0 U/	70	1.0
Ethylbenzene	1.0 U/	1.0 U/	1.0 U/	34	1.0
Methylene chloride	0.77 J/	2.0 U/	2.0 U/	5	2.0
Tetrachloroethylene	1.0 U/	1.0 U/	1.0 U/	5	1.0
Trichloroethylene	0.42 J/J	0.55 J/	1.0 U/	5	1.0
Vinyl chloride	0.47 J/	0.63 J/	2.0 U/	2	2.0
4-Methyl-2-pentanone	1.0 U/	1.0 U/	1.0 U/	15	1.0
bis (2-Chloroethyl) ether	5.2 U/UJ	NS	NS	9.6	5.2
bis(2-Ethylhexyl) - phthalate	5.2 U/	NS	NS	6	5.2
4 - Methylphenol	5.2 U/	NS	NS	34	5.2
Isophorone	5.2 U/	NS	NS	50	5.2
Pentachlorophenol	26 U/	NS	NS	1	26
PCB/Aroclor-1016 <sup>1</sup>	0.51 U/	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.51
PCB/Aroclor-1221 <sup>1</sup>	0.51 U/	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.51
PCB/Aroclor-1232 <sup>1</sup>	0.51 U/	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.51
PCB/Aroclor-1242 <sup>1</sup>	0.51 U/	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.51
PCB/Aroclor-1248 <sup>1</sup>	0.51 U/	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.51
PCB/Aroclor-1254 <sup>1</sup>	0.51 U/	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.51
PCB/Aroclor-1260 <sup>1</sup>	0.51 U/	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.51

**Notes:**

Bolded result indicates a exceedence of the discharge limit

pH data is expressed in S.U.

BOD and TSS data is expressed in mg/L

Metals, VOC, SVOC and PCB data is expressed in ug/L

1. Effluent standards for the Groundwater Treatment Plant were established based on maximum contaminant levels, Indiana water quality effluent limits, or best available treatment technologies. However, laboratory equipment could not read down to the effluent standards for mercury or PCBs. Therefore, the lowest equipment detection limit (or limit range for PCBs) for these compounds were established as their respective effluent standards.

ND = Not detected

NS = This analyte was not sampled or analyzed for

NE = No effluent limit established.

DL = Detection limit

**Suffix Definitions:**

/ = Data qualifier added by laboratory

/\_ = Data qualifier added by data validator

J = Result is detected below the reporting limit and is an estimated concentration

U = Analyte is not detected at or above the indicated concentration

UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value, however the calibration was out of range. Therefore the concentration is estimated.

H = Analyte was prepared and/or analyzed outside of the analytical method holding time

**Table 3.1**  
**Thermal Oxidizer 1 Results for Method TO-15 (VOCs) - July 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	07/09/09						
		Therm-Ox 1				Destruction Efficiency		
		Influent	Influent Dup	Effluent	Low	High	Average	
1,1,1-Trichloroethane	ppbv	3,800	/	4,000 /J	16		NC	NC NC NC
1,1,2,2-Tetrachloroethane	ppbv	ND	U/UJ	ND U/UJ	ND	U	NC	NC NC NC
1,1,2-Trichloroethane	ppbv	ND	U/UJ	ND U	ND	U	NC	NC NC NC
1,1-Dichloroethane	ppbv	1,000	/	1,100 /J	4.1		NC	NC NC NC
1,1-Dichloroethene	ppbv	39	/	34 /J	44		NC	NC NC NC
1,2-Dichloroethane	ppbv	69	/	78 /J	0.60		NC	NC NC NC
1,2-Dichloropropane	ppbv	58	/	67 /J	ND	U	NC	NC NC NC
2-Butanone (Methyl Ethyl Ketone)	ppbv	140	/	140 /J	9.1		NC	NC NC NC
2-Hexanone	ppbv	ND	U/UJ	28 J/J	0.91	J	NC	NC NC NC
4-Methyl-2-pentanone	ppbv	110	/J	110 /J	2.8		NC	NC NC NC
Acetone	ppbv	680	/B	620 /B	33	/B	NC	NC NC NC
Benzene	ppbv	870	/	1,000 /J	20		NC	NC NC NC
Bromodichloromethane	ppbv	ND	U	44 /UJ	ND	U	NC	NC NC NC
Bromoform	ppbv	ND	U/UJ	ND U/UJ	ND	U	NC	NC NC NC
Bromomethane	ppbv	ND	U	ND U/UJ	ND	U	NC	NC NC NC
Carbon Disulfide	ppbv	ND	U	ND U/UJ	ND	U	NC	NC NC NC
Carbon Tetrachloride	ppbv	ND	U	ND U/UJ	ND	U	NC	NC NC NC
Chlorobenzene	ppbv	ND	U/UJ	37 /J	0.45	J	NC	NC NC NC
Chloroethane	ppbv	19	J	36 /J	ND	U	NC	NC NC NC
Chloroform	ppbv	860	/	1,100 /J	8.5		NC	NC NC NC
Chloromethane	ppbv	16	J	22.00 J/J	1.9	J	NC	NC NC NC
cis-1,2-Dichloroethene	ppbv	2,300	/	2,700 /J	17		NC	NC NC NC
cis-1,3-Dichloropropene	ppbv	ND	U	ND U/UJ	ND	U	NC	NC NC NC
Dibromochloromethane	ppbv	ND	U/UJ	ND U/UJ	ND	U	NC	NC NC NC
Ethyl Benzene	ppbv	900	/J	930 /	2.8		NC	NC NC NC
m,p-Xylene	ppbv	3,700	/J	4,000 /J	10		NC	NC NC NC
Methylene Chloride	ppbv	970	/	1,600 /J	17		NC	NC NC NC
o-Xylene	ppbv	1,400	/J	1,500 /	3.5		NC	NC NC NC
Styrene	ppbv	12	J/J	13 J/J	4.6		NC	NC NC NC
Tetrachloroethene	ppbv	5,300	/J	2,800 /J	54		NC	NC NC NC
Toluene	ppbv	4,800	/J	5,100 /J	51		NC	NC NC NC
trans-1,2-Dichloroethene	ppbv	20	J	ND U/UJ	6.3		NC	NC NC NC
trans-1,3-Dichloropropene	ppbv	ND	U/UJ	ND U/UJ	ND	U	NC	NC NC NC
Trichloroethene	ppbv	4,700	/	5,400 /J	40		NC	NC NC NC
Vinyl Chloride	ppbv	170	/	230 /J	8.9		NC	NC NC NC
<b>Total</b>	<b>ppbv</b>	<b>31,933</b>		<b>32,689</b>	<b>356.5</b>		<b>98.88%</b>	<b>98.91%</b>
<b>Total</b>	<b>lb/hr</b>	<b>0.460</b>		<b>0.452</b>	<b>0.005</b>		<b>98.89%</b>	<b>98.91%</b>
								<b>98.90%</b>

**Notes:**

NC - Not calculated  
 ppbv - Parts per billion volume  
 lb/hr - Pounds per hour

**Qualifiers:**

U - Below reported quantitation limit  
 J - Result is estimated  
 B - Compound or analyte was positively detected in sample and in associated blank  
 UJ - Indicates the compound or analyte was analyzed for but not detected.  
     The sample detection limit is an estimated value.  
 \_/ - Laboratory data qualifier  
 /\_ - Data validation qualifier

Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.

Destruction efficiencies were also not calculated if the effluent result exceeded either influent result.

Total destruction efficiencies that include the estimated results of any individual compound will be considered an estimated value.

System	Date	Temp (F)	Flow (scfm)
Therm-Ox 1	07/09/09	113	776

Temperatures and flow rates reported correspond to instantaneous readings.

**Table 3.2**  
**Thermal Oxidizer 1 Results for Method TO-15 (VOCs) - August 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	08/06/09						Destruction Efficiency		
		Therm-Ox 1			Effluent			Low	High	Average
1,1,1-Trichloroethane	ppbv	11,000		11,000		11		99.90%	99.90%	99.90%
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
1,1,2-Trichloroethane	ppbv	19	J	20	J	ND	U	NC	NC	NC
1,1-Dichloroethane	ppbv	1,600		1,500		2.8		99.81%	99.83%	99.82%
1,1-Dichloroethene	ppbv	58		56		44		21.43%	24.14%	22.78%
1,2-Dichloroethane	ppbv	110		110		0.46	J	NC	NC	NC
1,2-Dichloropropane	ppbv	99		95		ND	U	100.00%	100.00%	100.00%
2-Butanone (Methyl Ethyl Ketone)	ppbv	170		200		2.7		98.41%	98.65%	98.53%
2-Hexanone	ppbv	ND	U	ND	U	0.73	J	NC	NC	NC
4-Methyl-2-pentanone	ppbv	170		190		1.6		99.06%	99.16%	99.11%
Acetone	ppbv	350		350		13		96.29%	96.29%	96.29%
Benzene	ppbv	1,100		1,100		17		98.45%	98.45%	98.45%
Bromodichloromethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Bromoform	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Bromomethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Carbon Disulfide	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Carbon Tetrachloride	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Chlorobenzene	ppbv	120		ND	U	0.43	J	NC	NC	NC
Chloroethane	ppbv	53		52		ND	U	100.00%	100.00%	100.00%
Chloroform	ppbv	2,600		2,700		6.0		99.77%	99.78%	99.77%
Chloromethane	ppbv	ND	U	ND	U	1.7	J	NC	NC	NC
cis-1,2-Dichloroethene	ppbv	5,800		5,600		14		99.75%	99.76%	99.75%
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Dibromochloromethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Ethyl Benzene	ppbv	2,100		2,100		2.8		99.87%	99.87%	99.87%
m,p-Xylene	ppbv	7,600		7,800		9.8		99.87%	99.87%	99.87%
Methylene Chloride	ppbv	2,200		2,200		10		99.55%	99.55%	99.55%
o-Xylene	ppbv	3,900		4,100		4.4		99.89%	99.89%	99.89%
Styrene	ppbv	29	J	29	J	5.2		NC	NC	NC
Tetrachloroethene	ppbv	11,000		11,000		65		99.41%	99.41%	99.41%
Toluene	ppbv	8,200		8,200		25		99.70%	99.70%	99.70%
trans-1,2-Dichloroethene	ppbv	47		47		6.3		86.60%	86.60%	86.60%
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Trichloroethene	ppbv	7,800		7,700		36		99.53%	99.54%	99.54%
Vinyl Chloride	ppbv	410		390		8.3		97.87%	97.98%	97.92%
<b>Total</b>	<b>ppbv</b>	<b>66,535</b>		<b>66,539</b>		<b>288.2</b>		<b>99.57%</b>	<b>99.57%</b>	<b>99.57%</b>
<b>Total</b>	<b>lb/hr</b>	<b>0.995</b>		<b>0.995</b>		<b>0.004</b>		<b>99.60%</b>	<b>99.60%</b>	<b>99.60%</b>

**Notes:**

NC - Not calculated  
 ppbv - Parts per billion volume  
 lb/hr - Pounds per hour

**Qualifiers:**

U - Below reported quantitation limit  
 J - Result is estimated  
 \_/ - Laboratory data qualifier  
 /\_ - Data validation qualifier

Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.

Destruction efficiencies were also not calculated if the effluent result exceeded either influent result.

Total destruction efficiencies that include the estimated results of any individual compound will be considered an estimated value.

System	Date	Temp (F)	Flow (scfm)
Therm-Ox 1	08/06/09	108	791

Temperatures and flow rates reported correspond to instantaneous readings.

**Table 3.3**  
**Thermal Oxidizer 1 Results for Method TO-15 (VOCs) - September 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	09/10/09						Destruction Efficiency		
		Therm-Ox 1			Effluent			Low	High	Average
1,1,1-Trichloroethane	ppbv	19,000		21,000		9.6		99.95%	99.95%	99.95%
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
1,1,2-Trichloroethane	ppbv	38		40		ND	U	100.00%	100.00%	100.00%
1,1-Dichloroethane	ppbv	2,700		2,800		2.7		99.90%	99.90%	99.90%
1,1-Dichloroethene	ppbv	100		97		56		42.27%	44.00%	43.13%
1,2-Dichloroethane	ppbv	130		140		0.55		99.58%	99.61%	99.59%
1,2-Dichloropropane	ppbv	140		170		ND	U	100.00%	100.00%	100.00%
2-Butanone (Methyl Ethyl Ketone)	ppbv	2,600		3,400		8.6		99.67%	99.75%	99.71%
2-Hexanone	ppbv	ND	U	ND	U	0.7	J	NC	NC	NC
4-Methyl-2-pentanone	ppbv	170		1,000		2.3		98.65%	99.77%	99.21%
Acetone	ppbv	14,000		16,000		34		99.76%	99.79%	99.77%
Benzene	ppbv	1,900		2,800		38		98.00%	98.64%	98.32%
Bromodichloromethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Bromoform	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Bromomethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Carbon Disulfide	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Carbon Tetrachloride	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Chlorobenzene	ppbv	ND	U	ND	U	0.65		NC	NC	NC
Chloroethane	ppbv	220		210		ND	U	100.00%	100.00%	100.00%
Chloroform	ppbv	3,100		3,000		6.0		99.80%	99.81%	99.80%
Chloromethane	ppbv	ND	U	ND	U	3.6		NC	NC	NC
cis-1,2-Dichloroethene	ppbv	18,000	/J	17,000	/J	22	/J	NC	NC	NC
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Dibromochloromethane	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Ethyl Benzene	ppbv	3,500		4,700		5.8		99.83%	99.88%	99.86%
m,p-Xylene	ppbv	19,000		28,000		18		99.91%	99.94%	99.92%
Methylene Chloride	ppbv	13,000	/J	11,000	/J	22	J/J	NC	NC	NC
o-Xylene	ppbv	5,900		12,000		7.8		99.87%	99.94%	99.90%
Styrene	ppbv	57		68		12		78.95%	82.35%	80.65%
Tetrachloroethene	ppbv	23,000		25,000		79		99.66%	99.68%	99.67%
Toluene	ppbv	22,000		29,000		60		99.73%	99.79%	99.76%
trans-1,2-Dichloroethene	ppbv	110	/J	100	/J	10	/J	NC	NC	NC
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U	ND	U	NC	NC	NC
Trichloroethene	ppbv	16,000		18,000		56		99.65%	99.69%	99.67%
Vinyl Chloride	ppbv	1,300		1,200		18		98.50%	98.62%	98.56%
<b>Total</b>	<b>ppbv</b>	<b>165,965</b>		<b>196,725</b>		<b>473.3</b>		<b>99.71%</b>	<b>99.76%</b>	<b>99.74%</b>
<b>Total</b>	<b>lb/hr</b>	<b>2.006</b>		<b>2.367</b>		<b>0.006</b>		<b>99.70%</b>	<b>99.75%</b>	<b>99.72%</b>

**Notes:**

NC - Not calculated  
 ppbv - Parts per billion volume  
 lb/hr - Pounds per hour

**Qualifiers:**

U - Below reported quantitation limit  
 J - Result is estimated  
 / - Laboratory data qualifier  
 /\_ - Data validation qualifier

Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.

Destruction efficiencies were also not calculated if the effluent result exceeded either influent result.

Total destruction efficiencies that include the estimated results of any individual compound will be considered an estimated value.

System	Date	Temp (F)	Flow (scfm)
Therm-Ox 1	09/10/09	105	693

Temperatures and flow rates reported correspond to instantaneous readings.

**Table 3.4**  
**Thermal Oxidizer 2 Results for Method TO-15 (VOCs) - July 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	07/09/09							
		Therm-Ox 2				Destruction Efficiency			
		Influent	Influent Dup	Effluent		Low	High	Average	
1,1,1-Trichloroethane	ppbv	5,700		5,200 /J	220		NC	NC	NC
1,1,2,2-Tetrachloroethane	ppbv	ND	U/UJ	ND U/UJ	ND	U	NC	NC	NC
1,1,2-Trichloroethane	ppbv	46	/J	69	4.1		NC	NC	NC
1,1-Dichloroethane	ppbv	1,400		1,600 /J	44		NC	NC	NC
1,1-Dichloroethene	ppbv	55		82 /J	96		NC	NC	NC
1,2-Dichloroethane	ppbv	370		420 /J	13		NC	NC	NC
1,2-Dichloropropane	ppbv	120		120 /J	3.3		NC	NC	NC
2-Butanone (Methyl Ethyl Ketone)	ppbv	1,100		1,100 /J	35		NC	NC	NC
2-Hexanone	ppbv	ND	U/UJ	ND U/UJ	1.5	J	NC	NC	NC
4-Methyl-2-pentanone	ppbv	360	/J	430 /J	18		NC	NC	NC
Acetone	ppbv	1,700	/B	1,700 /B	160	/B	NC	NC	NC
Benzene	ppbv	5,100		4,800 /J	200		NC	NC	NC
Bromodichloromethane	ppbv	ND	U	ND U/UJ	ND	U	NC	NC	NC
Bromoform	ppbv	ND	U/UJ	ND U/UJ	ND	U	NC	NC	NC
Bromomethane	ppbv	ND	U	ND U/UJ	ND	U	NC	NC	NC
Carbon Disulfide	ppbv	ND	U	ND U/UJ	ND	U	NC	NC	NC
Carbon Tetrachloride	ppbv	ND	U	ND U/UJ	0.58		NC	NC	NC
Chlorobenzene	ppbv	ND	U/UJ	ND U/UJ	2.7		NC	NC	NC
Chloroethane	ppbv	230		230 /J	2.3		NC	NC	NC
Chloroform	ppbv	930		870 /J	38		NC	NC	NC
Chloromethane	ppbv	23	J	17 J/J	6.1		NC	NC	NC
cis-1,2-Dichloroethene	ppbv	1,100		1,300 /J	20		NC	NC	NC
cis-1,3-Dichloropropene	ppbv	ND	U	ND U/UJ	ND	U	NC	NC	NC
Dibromochloromethane	ppbv	ND	U/UJ	ND U/UJ	ND	U	NC	NC	NC
Ethyl Benzene	ppbv	1,900	/J	2,600	60		NC	NC	NC
m,p-Xylene	ppbv	8,500	/J	8,800 /J	210		NC	NC	NC
Methylene Chloride	ppbv	6,000		5,700 /J	200		NC	NC	NC
o-Xylene	ppbv	3,600	/J	3,600	86		NC	NC	NC
Styrene	ppbv	80	/J	74 /J	26		NC	NC	NC
Tetrachloroethene	ppbv	3,300	/J	3,200 /J	230		NC	NC	NC
Toluene	ppbv	19,000	/J	21,000 /J	880		NC	NC	NC
trans-1,2-Dichloroethene	ppbv	ND	U	31 /J	5.9		NC	NC	NC
trans-1,3-Dichloropropene	ppbv	ND	U/UJ	ND U/UJ	ND	U	NC	NC	NC
Trichloroethene	ppbv	4,000		3,900 /J	160		NC	NC	NC
Vinyl Chloride	ppbv	460		390 /J	19.00		NC	NC	NC
<b>Total</b>	<b>ppbv</b>	<b>65,074</b>		<b>67,233</b>	<b>2,741.5</b>		<b>95.79%</b>	<b>95.92%</b>	<b>95.85%</b>
<b>Total</b>	<b>lb/hr</b>	<b>1.776</b>		<b>1.827</b>	<b>0.075</b>		<b>95.78%</b>	<b>95.89%</b>	<b>95.84%</b>

**Notes:**

NC - Not calculated  
 ppbv - parts per billion volume  
 lb/hr - pounds per hour

**Qualifiers:**

U - Below reported quantitation limit  
 J - Result is estimated  
 B - Compound or analyte was positively detected in sample and in associated blank  
 UJ - Indicates the compound or analyte was analyzed for but not detected.  
 The sample detection limit is an estimated value.  
 \_/ - Laboratory data qualifier  
 /\_ - Data validation qualifier

Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.

Destruction efficiencies were also not calculated if the effluent result exceeded either influent result.

Total destruction efficiencies that include the estimated results of any individual compound will be considered an estimated value.

System	Date	Temp (F)	Flow (scfm)
Therm-Ox 2	07/09/09	80	1,685

Temperatures and flow rates reported correspond to instantaneous readings.

**Table 3.5**  
**Thermal Oxidizer 2 Results for Method TO-15 (VOCs) - August 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	08/06/09						
		Therm-Ox 2					Destruction Efficiency	
		Influent		Influent Dup		Effluent		Low
1,1,1-Trichloroethane	ppbv	11,000		12,000		330		97.00% 97.25% 97.13%
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U	0.74		NC NC NC
1,1,2-Trichloroethane	ppbv	67		63		3.5		94.44% 94.78% 94.61%
1,1-Dichloroethane	ppbv	1,900		1,900		61		96.79% 96.79% 96.79%
1,1-Dichloroethene	ppbv	46		43		130		NC NC NC
1,2-Dichloroethane	ppbv	290		280		11		96.07% 96.21% 96.14%
1,2-Dichloropropane	ppbv	82		82		2.8		96.59% 96.59% 96.59%
2-Butanone (Methyl Ethyl Ketone)	ppbv	1,800		1,900		42	J	NC NC NC
2-Hexanone	ppbv	ND	U	64	J	1.3	J	NC NC NC
4-Methyl-2-pentanone	ppbv	1,000		1,000		15		98.50% 98.50% 98.50%
Acetone	ppbv	2,200		2,200		ND	U	100.00% 100.00% 100.00%
Benzene	ppbv	3,800		3,900		220		94.21% 94.36% 94.28%
Bromodichloromethane	ppbv	ND	U	ND	U	ND	U	NC NC NC
Bromoform	ppbv	ND	U	ND	U	ND	U	NC NC NC
Bromomethane	ppbv	ND	U	ND	U	ND	U	NC NC NC
Carbon Disulfide	ppbv	ND	U	ND	U	ND	U	NC NC NC
Carbon Tetrachloride	ppbv	ND	U	ND	U	0.54		NC NC NC
Chlorobenzene	ppbv	ND	U	220		2.9		NC NC NC
Chloroethane	ppbv	140		120		6.3		94.75% 95.50% 95.13%
Chloroform	ppbv	1,200		1,100		50		95.45% 95.83% 95.64%
Chloromethane	ppbv	ND	U	ND	U	6.2		NC NC NC
cis-1,2-Dichloroethene	ppbv	1,600		1,600		61		96.19% 96.19% 96.19%
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U	ND	U	NC NC NC
Dibromochloromethane	ppbv	ND	U	ND	U	ND	U	NC NC NC
Ethyl Benzene	ppbv	3,400		3,500		78		97.71% 97.77% 97.74%
m,p-Xylene	ppbv	15,000		15,000		290		98.07% 98.07% 98.07%
Methylene Chloride	ppbv	8,700		8,800		320		96.32% 96.36% 96.34%
o-Xylene	ppbv	6,500		6,600		120		98.15% 98.18% 98.17%
Styrene	ppbv	140		140	/J	50		NC NC NC
Tetrachloroethene	ppbv	7,800		8,000		320		95.90% 96.00% 95.95%
Toluene	ppbv	26,000		24,000		690		97.13% 97.35% 97.24%
trans-1,2-Dichloroethene	ppbv	20	J	ND	U	8.9		NC NC NC
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U	ND	U	NC NC NC
Trichloroethene	ppbv	7,400		7,500		260		96.49% 96.53% 96.51%
Vinyl Chloride	ppbv	120		110		26		76.36% 78.33% 77.35%
<b>Total</b>	<b>ppbv</b>	<b>100,205</b>		<b>100,122</b>		<b>3,107.2</b>		<b>96.90% 96.90% 96.90%</b>
<b>Total</b>	<b>lb/hr</b>	<b>2.714</b>		<b>2.727</b>		<b>0.085</b>		<b>96.87% 96.88% 96.88%</b>

**Notes:**

NC - Not calculated  
 ppbv - parts per billion volume  
 lb/hr - pounds per hour

Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.

Destruction efficiencies were also not calculated if the effluent result exceeded either influent result.

Total destruction efficiencies that include the estimated results of any individual compound will be considered an estimated value.

**Qualifiers:**

U - Below reported quantitation limit  
 J - Result is estimated  
 / - Laboratory data qualifier  
 /\_ - Data validation qualifier

System	Date	Temp (F)	Flow (scfm)
Therm-Ox 2	08/06/09	82	1,598

Temperatures and flow rates reported correspond to instantaneous readings.

**Table 3.6**  
**Thermal Oxidizer 2 Results for Method TO-15 (VOCs) - September 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	09/10/09						
		Therm-Ox 2				Destruction Efficiency		
		Influent	Influent Dup	Effluent		Low	High	Average
1,1,1-Trichloroethane	ppbv	21,000		22,000		630		97.00% 97.14% 97.07%
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U	ND	U	NC NC NC
1,1,2-Trichloroethane	ppbv	90		98		4.7		94.78% 95.20% 94.99%
1,1-Dichloroethane	ppbv	3,200		3,100		91		97.06% 97.16% 97.11%
1,1-Dichloroethene	ppbv	71		64		160		NC NC NC
1,2-Dichloroethane	ppbv	340		410		14		95.88% 96.59% 96.23%
1,2-Dichloropropane	ppbv	110		130		3.6		96.73% 97.23% 96.98%
2-Butanone (Methyl Ethyl Ketone)	ppbv	2,800		2,900		88		96.86% 96.97% 96.91%
2-Hexanone	ppbv	ND	U	ND	U	1.6	J	NC NC NC
4-Methyl-2-pentanone	ppbv	1,400		1,800		33		97.64% 98.17% 97.90%
Acetone	ppbv	4,500		4,500		130		97.11% 97.11% 97.11%
Benzene	ppbv	5,900		5,800		480		91.72% 91.86% 91.79%
Bromodichloromethane	ppbv	ND	U	ND	U	ND	U	NC NC NC
Bromoform	ppbv	ND	U	ND	U	ND	U	NC NC NC
Bromomethane	ppbv	ND	U	ND	U	ND	U	NC NC NC
Carbon Disulfide	ppbv	ND	U	ND	U	ND	U	NC NC NC
Carbon Tetrachloride	ppbv	ND	U	ND	U	0.78		NC NC NC
Chlorobenzene	ppbv	ND	U	ND	U	6.6		NC NC NC
Chloroethane	ppbv	720		520		19		96.35% 97.36% 96.85%
Chloroform	ppbv	1,600		1,600		67		95.81% 95.81% 95.81%
Chloromethane	ppbv	ND	U	ND	U	13		NC NC NC
cis-1,2-Dichloroethene	ppbv	5,800	/J	5,300	/J	160	/J	NC NC NC
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U	0.38	J	NC NC NC
Dibromochloromethane	ppbv	ND	U	ND	U	ND	U	NC NC NC
Ethyl Benzene	ppbv	5,200		5,100		130		97.45% 97.50% 97.48%
m,p-Xylene	ppbv	33,000		35,000		460		98.61% 98.69% 98.65%
Methylene Chloride	ppbv	30,000	/J	31,000	/J	500	/J	NC NC NC
o-Xylene	ppbv	15,000		16,000		220		98.53% 98.63% 98.58%
Styrene	ppbv	200		230		56		72.00% 75.65% 73.83%
Tetrachloroethene	ppbv	16,000		17,000		470		97.06% 97.24% 97.15%
Toluene	ppbv	36,000	/J	36,000	/J	1,500		NC NC NC
trans-1,2-Dichloroethene	ppbv	65	/J	40		21		NC NC NC
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U	0.32	J	NC NC NC
Trichloroethene	ppbv	15,000		16,000		480		96.80% 97.00% 96.90%
Vinyl Chloride	ppbv	1,200		800		69		91.38% 94.25% 92.81%
<b>Total</b>	<b>ppbv</b>	<b>199,196</b>		<b>205,392</b>		<b>5,809.0</b>		<b>97.08% 97.17% 97.13%</b>
<b>Total</b>	<b>lb/hr</b>	<b>5.522</b>		<b>5.723</b>		<b>0.159</b>		<b>97.12% 97.22% 97.17%</b>

**Notes:**

NC - Not calculated

ppbv - parts per billion volume

lb/hr - pounds per hour

**Qualifiers:**

U - Below reported quantitation limit

J - Result is estimated

/ - Laboratory data qualifier

/ - Data validation qualifier

Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.

Destruction efficiencies were also not calculated if the effluent result exceeded either influent result.

Total destruction efficiencies that include the estimated results of any individual compound will be considered an estimated value.

System	Date	Temp (F)	Flow (scfm)
Therm-Ox 2	09/10/09	80	1,640

Temperatures and flow rates reported correspond to instantaneous readings.

**Table 3.7**  
**SBPA and Off-Site ISVE System Results**  
**for Method TO-15 (VOCs) - July 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	07/09/09		
		SBPA ISVE	Off-Site ISVE	
1,1,1-Trichloroethane	ppbv	4,100	8,700	
1,1,2,2-Tetrachloroethane	ppbv	ND	U/UJ	ND U/UJ
1,1,2-Trichloroethane	ppbv	12	J/J	86 /J
1,1-Dichloroethane	ppbv	1,100		1,800
1,1-Dichloroethene	ppbv	50		91
1,2-Dichloroethane	ppbv	88		470
1,2-Dichloropropane	ppbv	77		130
2-Butanone (Methyl Ethyl Ketone)	ppbv	210		920
2-Hexanone	ppbv	ND	U/UJ	ND U/UJ
4-Methyl-2-pentanone	ppbv	190	/J	670 /J
Acetone	ppbv	760	/B	1,500 /B
Benzene	ppbv	880		5,100
Bromodichloromethane	ppbv	ND	U	ND U
Bromoform	ppbv	ND	U/UJ	ND U/UJ
Bromomethane	ppbv	ND	U	ND U
Carbon Disulfide	ppbv	ND	U	ND U
Carbon Tetrachloride	ppbv	ND	U	ND U
Chlorobenzene	ppbv	ND	U/UJ	ND U/UJ
Chloroethane	ppbv	17	J	49
Chloroform	ppbv	1,100		1,200
Chloromethane	ppbv	ND	U	19 J
cis-1,2-Dichloroethene	ppbv	2,400		910
cis-1,3-Dichloropropene	ppbv	ND	U	ND U
Dibromochloromethane	ppbv	ND	U/UJ	ND U/UJ
Ethyl Benzene	ppbv	1,200	/J	3,200 /J
m,p-Xylene	ppbv	5,000	/J	6,900 /J
Methylene Chloride	ppbv	970		9,400
o-Xylene	ppbv	1,900	/J	4,700 /J
Styrene	ppbv	ND	U/J	87 /J
Tetrachloroethene	ppbv	5,700	/J	5,500 /J
Toluene	ppbv	5,100	/J	20,000 /J
trans-1,2-Dichloroethene	ppbv	27	J	23 J
trans-1,3-Dichloropropene	ppbv	ND	U/UJ	ND U/UJ
Trichloroethene	ppbv	4,900		6,100
Vinyl Chloride	ppbv	150		110
<b>Total</b>	<b>ppbv</b>	<b>35,931</b>		<b>77,665</b>
<b>Total</b>	<b>lb/hr</b>	<b>0.582</b>		<b>2.016</b>

**Notes:**

NC - Not calculated  
 ppbv - parts per billion volume  
 lb/hr - pounds per hour

**Qualifiers:**

J - Result is estimated  
 U - Below reported quantitation limit  
 B - Compound or analyte was positively detected in sample and in associated blank.  
 UJ - Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.  
 \_/ - Laboratory data qualifier  
 /\_ - Data validation qualifier

System	Date	Temp (F)	Flow (scfm)
On-site	07/09/09	116	875
Off-site	07/09/09	78	1,551

Temperatures and flow rates reported correspond to instantaneous readings.

**Table 3.8**  
**SBPA and Off-Site ISVE System Results**  
**for Method TO-15 (VOCs) - August 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	08/06/09			
		SBPA ISVE	Off-Site ISVE		
1,1,1-Trichloroethane	ppbv	5,300		16,000	
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U
1,1,2-Trichloroethane	ppbv	17	J	76	
1,1-Dichloroethane	ppbv	790		1,000	
1,1-Dichloroethene	ppbv	55		51	
1,2-Dichloroethane	ppbv	110		330	
1,2-Dichloropropane	ppbv	95		92	
2-Butanone (Methyl Ethyl Ketone)	ppbv	190		1,000	
2-Hexanone	ppbv	ND	U	ND	U
4-Methyl-2-pentanone	ppbv	210		820	
Acetone	ppbv	380		1,200	
Benzene	ppbv	1,100		2,200	
Bromodichloromethane	ppbv	ND	U	ND	U
Bromoform	ppbv	ND	U	ND	U
Bromomethane	ppbv	ND	U	ND	U
Carbon Disulfide	ppbv	ND	U	ND	U
Carbon Tetrachloride	ppbv	ND	U	ND	U
Chlorobenzene	ppbv	ND	U	ND	U
Chloroethane	ppbv	55		85	
Chloroform	ppbv	1,300		800	
Chloromethane	ppbv	ND	U	ND	U
cis-1,2-Dichloroethene	ppbv	2,900		710	
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U
Dibromochloromethane	ppbv	ND	U	ND	U
Ethyl Benzene	ppbv	1,000		2,000	
m,p-Xylene	ppbv	3,800		8,600	
Methylene Chloride	ppbv	1,200		5,000	
o-Xylene	ppbv	2,000		3,700	
Styrene	ppbv	31		150	
Tetrachloroethene	ppbv	5,300		4,500	
Toluene	ppbv	4,200		39,000	
trans-1,2-Dichloroethene	ppbv	44		ND	U
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U
Trichloroethene	ppbv	3,900		4,200	
Vinyl Chloride	ppbv	370		100	
<b>Total</b>	<b>ppbv</b>	<b>34,347</b>		<b>91,614</b>	
<b>Total</b>	<b>lb/hr</b>	<b>0.569</b>		<b>2.232</b>	

**Notes:**

NC - Not calculated  
 ppbv - parts per billion volume  
 lb/hr - pounds per hour

**Qualifiers:**

J - Result is estimated  
 U - Below reported quantitation limit  
 \_J - Laboratory data qualifier  
 /\_ - Data validation qualifier

System	Date	Temp (F)	Flow (scfm)
On-site	08/06/09	110	892
Off-site	08/06/09	81	1,453

Temperatures and flow rates reported correspond to instantaneous readings.

**Table 3.9**  
**SBPA and Off-Site ISVE System Results**  
**for Method TO-15 (VOCs) - September 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	09/10/09			
		SBPA ISVE		Off-Site ISVE	
1,1,1-Trichloroethane	ppbv	17,000		25,000	
1,1,2,2-Tetrachloroethane	ppbv	13	J	13	J
1,1,2-Trichloroethane	ppbv	40		100	
1,1-Dichloroethane	ppbv	2,400		3,000	
1,1-Dichloroethene	ppbv	95		72	
1,2-Dichloroethane	ppbv	130		380	
1,2-Dichloropropane	ppbv	150		120	
2-Butanone (Methyl Ethyl Ketone)	ppbv	4,400		3,800	
2-Hexanone	ppbv	ND	U	ND	U
4-Methyl-2-pentanone	ppbv	1,100		1,100	
Acetone	ppbv	17,000		5,000	
Benzene	ppbv	1,900		11,000	
Bromodichloromethane	ppbv	ND	U	ND	U
Bromoform	ppbv	ND	U	ND	U
Bromomethane	ppbv	ND	U	ND	U
Carbon Disulfide	ppbv	ND	U	ND	U
Carbon Tetrachloride	ppbv	ND	U	ND	U
Chlorobenzene	ppbv	ND	U	ND	U
Chloroethane	ppbv	220		100	
Chloroform	ppbv	3,000		2,100	
Chloromethane	ppbv	ND	U	ND	U
cis-1,2-Dichloroethene	ppbv	17,000	/J	1,400	/J
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U
Dibromochloromethane	ppbv	ND	U	ND	U
Ethyl Benzene	ppbv	4,100		5,300	
m,p-Xylene	ppbv	23,000		37,000	
Methylene Chloride	ppbv	13,000	/J	36,000	/J
o-Xylene	ppbv	11,000		16,000	
Styrene	ppbv	73		230	
Tetrachloroethene	ppbv	24,000		18,000	
Toluene	ppbv	23,000		37,000	/J
trans-1,2-Dichloroethene	ppbv	110	/J	33	/J
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U
Trichloroethene	ppbv	15,000		18,000	
Vinyl Chloride	ppbv	1,200		190	
<b>Total</b>	<b>ppbv</b>	<b>178,931</b>		<b>220,938</b>	
<b>Total</b>	<b>lb/hr</b>	<b>2,378</b>		<b>5,928</b>	

**Notes:**

NC - Not calculated  
 ppbv - parts per billion volume  
 lb/hr - pounds per hour

**Qualifiers:**

J - Result is estimated  
 U - Below reported quantitation limit  
 /J - Laboratory data qualifier  
 /\_ - Data validation qualifier

System	Date	Temp (F)	Flow (scfm)
On-site	09/10/09	108	773
Off-site	09/10/09	77	1,583

Temperatures and flow rates reported correspond to instantaneous readings.

**Table 3.10**  
**Thermal Oxidizer 1 Results for Method TO-13 (SVOCs) - July 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	07/09/09								
		Therm-Ox 1				Effluent		Destruction Efficiency		
		Influent		Influent Dup		Effluent		Low	High	Average
1,2,4-Trichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
1,2-Dichlorobenzene	µg	2.2	J	1	J	ND	U	NC	NC	NC
1,3-Dichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
1,4-Dichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4,5-Trichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4,6-Trichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dimethylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dinitrophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dinitrotoluene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,6-Dinitrotoluene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Chloronaphthalene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Chlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Methylnaphthalene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Nitrophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
3,3'-Dichlorobenzidine	µg	ND	U	ND	U	ND	U	NC	NC	NC
3/4-Methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
3-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Bromophenyl phenyl ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Chloro-3-methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Chloroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Chlorophenyl phenyl ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Nitrophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
Acenaphthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Acenaphthylene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[a]anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[a]pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[b]fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[g,h,i]perylene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[k]fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Bis(2-chloroethoxy)methane	µg	ND	U	ND	U	ND	U	NC	NC	NC
Bis(2-chloroethyl)ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
Bis(2-chloroisopropyl)ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
Bis(2-ethylhexyl)phthalate	µg	ND	U	1.5	Jb/UB	1.2	Jb/UB	NC	NC	NC
Butyl benzyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Carbazole	µg	ND	U	ND	U	ND	U	NC	NC	NC
Chrysene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dibenz[a,h]anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dibenzofuran	µg	ND	U	ND	U	ND	U	NC	NC	NC
Diethyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dimethyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Di-n-butyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Di-n-octyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Fluorene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachlorobutadiene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachlorocyclopentadiene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachloroethane	µg	ND	U	ND	U	ND	U	NC	NC	NC

**Table 3.10**  
**Thermal Oxidizer 1 Results for Method TO-13 (SVOCs) - July 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	07/09/09								
		Therm-Ox 1				Effluent		Destruction Efficiency		
		Influent		Influent Dup		Effluent		Low	High	Average
Indeno[1,2,3cd]pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Isophorone	µg	ND	U	ND	U	ND	U	NC	NC	NC
Naphthalene	µg	0.78	J	ND	U	ND	U	NC	NC	NC
Nitrobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
N-Nitrosodi-n-propylamine	µg	ND	U	ND	U	ND	U	NC	NC	NC
N-Nitrosodiphenylamine	µg	ND	U	ND	U	ND	U	NC	NC	NC
Pentachlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
Phenanthrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Phenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
Pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
<b>Total</b>	µg	<b>2.98</b>		<b>2.50</b>		<b>1.20</b>		<b>52.00%</b>	<b>59.73%</b>	<b>55.87%</b>

**Notes:**

µg - Microgram

NC - Not calculated

Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.

Destruction efficiencies were also not calculated if the effluent result exceeded either influent result.

Total destruction efficiencies that include the estimated results of any individual compound will be considered an estimated value.

**Qualifiers:**

J - Result is estimated

U - below reported quantitation limit

Jb - Detected in the associated Method Blank at a concentration between

the Reporting Limit and Method Detection Limit

UB - Compound or analyte is not detected at or above the indicated concentration

due to blank contamination.

/\_ - Laboratory data qualifier

/\_ - Data validation qualifier

**Table 3.11**  
**Thermal Oxidizer 1 Results for Method TO-13 (SVOCs) - August 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	08/06/09							
		Therm-Ox 1				Effluent		Destruction Efficiency	
		Influent		Influent Dup		Low	High	Average	
1,2,4-Trichlorobenzene	µg	ND	U	ND	U	ND	U/UJ	NC	NC
1,2-Dichlorobenzene	µg	1.6	J	1.7	J	ND	U/UJ	NC	NC
1,3-Dichlorobenzene	µg	ND	U	ND	U	ND	U/UJ	NC	NC
1,4-Dichlorobenzene	µg	ND	U	ND	U	ND	U/UJ	NC	NC
2,4,5-Trichlorophenol	µg	ND	U/UJ	ND	U/UJ	ND	U	NC	NC
2,4,6-Trichlorophenol	µg	ND	U/UJ	ND	U/UJ	ND	U	NC	NC
2,4-Dichlorophenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC
2,4-Dimethylphenol	µg	ND	U/UJ	ND	U/UJ	ND	U	NC	NC
2,4-Dinitrophenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC
2,4-Dinitrotoluene	µg	ND	U	ND	U	ND	U	NC	NC
2,6-Dinitrotoluene	µg	ND	U	ND	U	ND	U	NC	NC
2-Chloronaphthalene	µg	ND	U	ND	U	ND	U	NC	NC
2-Chlorophenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC
2-Methylnaphthalene	µg	ND	U	ND	U	ND	U/UJ	NC	NC
2-Methylphenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC
2-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC
2-Nitrophenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC
3,3'-Dichlorobenzidine	µg	ND	U	ND	U	ND	U	NC	NC
3/4-Methylphenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC
3-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC
4,6-Dinitro-2-methylphenol	µg	ND	U/UJ	ND	U/UJ	ND	U	NC	NC
4-Bromophenyl phenyl ether	µg	ND	U	ND	U	ND	U	NC	NC
4-Chloro-3-methylphenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC
4-Chloroaniline	µg	ND	U	ND	U	ND	U/UJ	NC	NC
4-Chlorophenyl phenyl ether	µg	ND	U	ND	U	ND	U	NC	NC
4-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC
4-Nitrophenol	µg	ND	U/UJ	ND	U/UJ	ND	U	NC	NC
Acenaphthene	µg	ND	U	ND	U	ND	U	NC	NC
Acenaphthylene	µg	ND	U	ND	U	ND	U	NC	NC
Anthracene	µg	ND	U	ND	U	ND	U	NC	NC
Benzo[a]anthracene	µg	ND	U	ND	U	ND	U	NC	NC
Benzo[a]pyrene	µg	ND	U	ND	U	ND	U	NC	NC
Benzo[b]fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC
Benzo[g,h,i]perylene	µg	ND	U	ND	U	ND	U	NC	NC
Benzo[k]fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC
Bis(2-chloroethoxy)methane	µg	ND	U	ND	U	ND	U/UJ	NC	NC
Bis(2-chloroethyl)ether	µg	ND	U/UJ	ND	U	ND	U/UJ	NC	NC
Bis(2-chloroisopropyl)ether	µg	ND	U	ND	U	ND	U/UJ	NC	NC
Bis(2-ethylhexyl)phthalate	µg	ND	U	ND	U	ND	U	NC	NC
Butyl benzyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC
Carbazole	µg	ND	U	ND	U	ND	U	NC	NC
Chrysene	µg	ND	U	ND	U	ND	U	NC	NC
Dibenz[a,h]anthracene	µg	ND	U	ND	U	ND	U	NC	NC
Dibenzofuran	µg	ND	U	ND	U	ND	U	NC	NC
Diethyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC
Dimethyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC
Di-n-butyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC
Di-n-octyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC
Fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC
Fluorene	µg	ND	U	ND	U	ND	U	NC	NC
Hexachlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC
Hexachlorobutadiene	µg	ND	U	ND	U	ND	U/UJ	NC	NC
Hexachlorocyclopentadiene	µg	ND	U	ND	U	ND	U	NC	NC
Hexachloroethane	µg	ND	U	ND	U	ND	U/UJ	NC	NC

**Table 3.11**  
**Thermal Oxidizer 1 Results for Method TO-13 (SVOCs) - August 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	08/06/09							
		Therm-Ox 1				Effluent		Destruction Efficiency	
		Influent		Influent Dup		Low	High	Average	
Indeno[1,2,3cd]pyrene	µg	ND	U	ND	U	ND	U	NC	NC
Isophorone	µg	ND	U	ND	U	ND	U/UJ	NC	NC
Naphthalene	µg	ND	U	ND	U	ND	U/UJ	NC	NC
Nitrobenzene	µg	ND	U	ND	U	ND	U/UJ	NC	NC
N-Nitrosodi-n-propylamine	µg	ND	U	ND	U	ND	U/UJ	NC	NC
N-Nitrosodiphenylamine	µg	ND	U	ND	U	ND	U	NC	NC
Pentachlorophenol	µg	ND	U/UJ	ND	U/UJ	ND	U	NC	NC
Phenanthrene	µg	ND	U	ND	U	ND	U	NC	NC
Phenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC
Pyrene	µg	ND	U	ND	U	ND	U	NC	NC
<b>Total</b>	µg	<b>1.60</b>		<b>1.70</b>		<b>0.00</b>		<b>100.00%</b>	<b>100.00%</b>

**Notes:**

µg - Microgram

NC - Not calculated

Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.

Destruction efficiencies were also not calculated if the effluent result exceeded either influent result.

Total destruction efficiencies that include the estimated results of any individual compound will be considered an estimated value.

**Qualifiers:**

J - Result is estimated

U - below reported quantitation limit

UJ - Indicates the compound or analyte was analyzed for but not detected.

The sample detection limit is an estimated value.

/ - Laboratory data qualifier

/\_ - Data validation qualifier

**Table 3.12**  
**Thermal Oxidizer 1 Results for Method TO-13 (SVOCs) - September 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	09/10/09						
		Therm-Ox 1				Destruction Efficiency		
		Influent		Influent Dup		Effluent		Low
Compounds	Units	Influent	Influent Dup	Effluent	Effluent	Low	High	Average
1,2,4-Trichlorobenzene	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
1,2-Dichlorobenzene	µg	3	J	ND	U/UJ	ND	U	NC NC NC
1,3-Dichlorobenzene	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
1,4-Dichlorobenzene	µg	ND	U	ND	U/UJ	1.5	J	NC NC NC
2,4,5-Trichlorophenol	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
2,4,6-Trichlorophenol	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
2,4-Dichlorophenol	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
2,4-Dimethylphenol	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
2,4-Dinitrophenol	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
2,4-Dinitrotoluene	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
2,6-Dinitrotoluene	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
2-Chloronaphthalene	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
2-Chlorophenol	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
2-Methylnaphthalene	µg	1.5	J	ND	U/UJ	ND	U	NC NC NC
2-Methylphenol	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
2-Nitroaniline	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
2-Nitrophenol	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
3,3'-Dichlorobenzidine	µg	ND	U	ND	U	ND	U	NC NC NC
3/4-Methylphenol	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
3-Nitroaniline	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
4-Bromophenyl phenyl ether	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
4-Chloro-3-methylphenol	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
4-Chloroaniline	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC NC NC
4-Chlorophenyl phenyl ether	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
4-Nitroaniline	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
4-Nitrophenol	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
Acenaphthene	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
Acenaphthylene	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
Anthracene	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
Benzo[a]anthracene	µg	ND	U	ND	U	ND	U	NC NC NC
Benzo[a]pyrene	µg	ND	U	ND	U	ND	U	NC NC NC
Benzo[b]fluoranthene	µg	ND	U	ND	U	ND	U	NC NC NC
Benzo[g,h,i]perylene	µg	ND	U	ND	U	ND	U	NC NC NC
Benzo[k]fluoranthene	µg	ND	U	ND	U	ND	U	NC NC NC
Bis(2-chloroethoxy)methane	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
Bis(2-chloroethyl)ether	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC NC NC
Bis(2-chloroisopropyl)ether	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
Bis(2-ethylhexyl)phthalate	µg	ND	U	ND	U	ND	U	NC NC NC
Butyl benzyl phthalate	µg	ND	U	ND	U	ND	U	NC NC NC
Carbazole	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
Chrysene	µg	ND	U	ND	U	ND	U	NC NC NC
Dibenz[a,h]anthracene	µg	ND	U	ND	U	ND	U	NC NC NC
Dibenzofuran	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
Diethyl phthalate	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
Dimethyl phthalate	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
Di-n-butyl phthalate	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
Di-n-octyl phthalate	µg	ND	U	ND	U	ND	U	NC NC NC
Fluoranthene	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
Fluorene	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
Hexachlorobenzene	µg	ND	U	ND	U/UJ	ND	U	NC NC NC
Hexachlorobutadiene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC NC NC
Hexachlorocyclopentadiene	µg	ND	U/UJ	ND	U/UJ	ND	U	NC NC NC
Hexachloroethane	µg	ND	U	ND	U/UJ	ND	U	NC NC NC

**Table 3.12**  
**Thermal Oxidizer 1 Results for Method TO-13 (SVOCs) - September 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	09/10/09								
		Therm-Ox 1				Destruction Efficiency				
		Influent		Influent Dup		Effluent		Low	High	Average
Indeno[1,2,3cd]pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Isophorone	µg	1.7	J	ND	U/UJ	ND	U	NC	NC	NC
Naphthalene	µg	2.6		ND	U/UJ	ND	U	NC	NC	NC
Nitrobenzene	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
N-Nitrosodi-n-propylamine	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
N-Nitrosodiphenylamine	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
Pentachlorophenol	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
Phenanthrene	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
Phenol	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
Pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
<b>Total</b>	<b>µg</b>	<b>8.80</b>		<b>0.00</b>		<b>1.50</b>		<b>NC</b>	<b>NC</b>	<b>NC</b>

**Notes:**

µg - Microgram

NC - Not calculated

Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.

Destruction efficiencies were also not calculated if the effluent result exceeded either influent result.

Total destruction efficiencies that include the estimated results of any individual compound will be considered an estimated value.

**Qualifiers:**

J - Result is estimated

U - below reported quantitation limit

UJ - Indicates the compound or analyte was analyzed for but not detected.

The sample detection limit is an estimated value.

/\_ - Laboratory data qualifier

/\_ - Data validation qualifier

**Table 3.13**  
**Thermal Oxidizer 2 Results for Method TO-13 (SVOCs) - July 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	07/09/09							
		Therm-Ox 2				Destruction Efficiency			
		Influent	Influent Dup	Effluent		Low	High	Average	
1,2,4-Trichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC
1,2-Dichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC
1,3-Dichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC
1,4-Dichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC
2,4,5-Trichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC
2,4,6-Trichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC
2,4-Dichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC
2,4-Dimethylphenol	µg	ND	U	ND	U	ND	U	NC	NC
2,4-Dinitrophenol	µg	ND	U	ND	U	ND	U	NC	NC
2,4-Dinitrotoluene	µg	ND	U	ND	U	ND	U	NC	NC
2,6-Dinitrotoluene	µg	ND	U	ND	U	ND	U	NC	NC
2-Chloronaphthalene	µg	ND	U	ND	U	ND	U	NC	NC
2-Chlorophenol	µg	ND	U	ND	U	ND	U	NC	NC
2-Methylnaphthalene	µg	ND	U	ND	U	ND	U	NC	NC
2-Methylphenol	µg	ND	U	ND	U	ND	U	NC	NC
2-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC
2-Nitrophenol	µg	ND	U	ND	U	ND	U	NC	NC
3,3'-Dichlorobenzidine	µg	ND	U	ND	U	ND	U	NC	NC
3/4-Methylphenol	µg	ND	U	ND	U	ND	U	NC	NC
3-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U	ND	U	NC	NC
4-Bromophenyl phenyl ether	µg	ND	U	ND	U	ND	U	NC	NC
4-Chloro-3-methylphenol	µg	ND	U	ND	U	ND	U	NC	NC
4-Chloroaniline	µg	ND	U	ND	U	ND	U	NC	NC
4-Chlorophenyl phenyl ether	µg	ND	U	ND	U	ND	U	NC	NC
4-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC
4-Nitrophenol	µg	ND	U	ND	U	ND	U	NC	NC
Acenaphthene	µg	ND	U	ND	U	ND	U	NC	NC
Acenaphthylene	µg	ND	U	ND	U	ND	U	NC	NC
Anthracene	µg	ND	U	ND	U	ND	U	NC	NC
Benzo[a]anthracene	µg	ND	U	ND	U	ND	U	NC	NC
Benzo[a]pyrene	µg	ND	U	ND	U	ND	U	NC	NC
Benzo[b]fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC
Benzo[g,h,i]perylene	µg	ND	U	ND	U	ND	U	NC	NC
Benzo[k]fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC
Bis(2-chloroethoxy)methane	µg	ND	U	ND	U	ND	U	NC	NC
Bis(2-chloroethyl)ether	µg	ND	U	ND	U	ND	U	NC	NC
Bis(2-chloroisopropyl)ether	µg	ND	U	ND	U	ND	U	NC	NC
Bis(2-ethylhexyl)phthalate	µg	ND	U	ND	U	ND	U	NC	NC
Butyl benzyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC
Carbazole	µg	ND	U	ND	U	ND	U	NC	NC
Chrysene	µg	ND	U	ND	U	ND	U	NC	NC
Dibenz[a,h]anthracene	µg	ND	U	ND	U	ND	U	NC	NC
Dibenzofuran	µg	ND	U	ND	U	ND	U	NC	NC
Diethyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC
Dimethyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC
Di-n-butyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC
Di-n-octyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC
Fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC
Fluorene	µg	ND	U	ND	U	ND	U	NC	NC
Hexachlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC
Hexachlorobutadiene	µg	ND	U	ND	U	ND	U	NC	NC
Hexachlorocyclopentadiene	µg	ND	U	ND	U	ND	U	NC	NC
Hexachloroethane	µg	ND	U	ND	U	ND	U	NC	NC

**Table 3.13**  
**Thermal Oxidizer 2 Results for Method TO-13 (SVOCs) - July 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	07/09/09								
		Therm-Ox 2						Destruction Efficiency		
		Influent		Influent Dup		Effluent		Low	High	Average
Indeno[1,2,3cd]pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Isophorone	µg	ND	U	ND	U	ND	U	NC	NC	NC
Naphthalene	µg	1.3		1.2		1.8		NC	NC	NC
Nitrobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
N-Nitrosodi-n-propylamine	µg	ND	U	ND	U	ND	U	NC	NC	NC
N-Nitrosodiphenylamine	µg	ND	U	ND	U	ND	U	NC	NC	NC
Pentachlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
Phanthrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Phenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
Pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
<b>Total</b>	µg	<b>1.30</b>		<b>1.20</b>		<b>1.80</b>		NC	NC	NC

**Notes:**

µg - Microgram

NC - Not calculated

Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.

Destruction efficiencies were also not calculated if the effluent result exceeded either influent result.

Total destruction efficiencies that include the estimated results of any individual compound will be considered an estimated value.

**Qualifiers:**

U - below reported quantitation limit

/\_ - Laboratory data qualifier

/\_ - Data validation qualifier

**Table 3.14**  
**Thermal Oxidizer 2 Results for Method TO-13 (SVOCs) - August 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	08/06/09								
		Therm-Ox 2				Destruction Efficiency				
		Influent		Influent Dup		Effluent		Low	High	Average
1,2,4-Trichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
1,2-Dichlorobenzene	µg	0.73	J	1.9	J	ND	U	NC	NC	NC
1,3-Dichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
1,4-Dichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4,5-Trichlorophenol	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
2,4,6-Trichlorophenol	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
2,4-Dichlorophenol	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
2,4-Dimethylphenol	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
2,4-Dinitrophenol	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
2,4-Dinitrotoluene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,6-Dinitrotoluene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Chloronaphthalene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Chlorophenol	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
2-Methylnaphthalene	µg	ND	U	0.94	J	ND	U	NC	NC	NC
2-Methylphenol	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
2-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Nitrophenol	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
3,3'-Dichlorobenzidine	µg	ND	U	ND	U	ND	U	NC	NC	NC
3/4-Methylphenol	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
3-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
4-Bromophenyl phenyl ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Chloro-3-methylphenol	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
4-Chloroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Chlorophenyl phenyl ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Nitrophenol	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
Acenaphthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Acenaphthylene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[a]anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[a]pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[b]fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[g,h,i]perylene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[k]fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Bis(2-chloroethoxy)methane	µg	ND	U	ND	U	ND	U	NC	NC	NC
Bis(2-chloroethyl)ether	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Bis(2-chloroisopropyl)ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
Bis(2-ethylhexyl)phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Butyl benzyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Carbazole	µg	ND	U	ND	U	ND	U	NC	NC	NC
Chrysene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dibenz[a,h]anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dibenzofuran	µg	ND	U	ND	U	ND	U	NC	NC	NC
Diethyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dimethyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Di-n-butyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Di-n-octyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Fluorene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachlorobutadiene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachlorocyclopentadiene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachloroethane	µg	ND	U	ND	U	ND	U	NC	NC	NC

**Table 3.14**  
**Thermal Oxidizer 2 Results for Method TO-13 (SVOCs) - August 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	08/06/09								
		Therm-Ox 2						Destruction Efficiency		
		Influent		Influent Dup		Effluent		Low	High	Average
Indeno[1,2,3cd]pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Isophorone	µg	ND	U	2.2	J	ND	U	NC	NC	NC
Naphthalene	µg	1.5	U	3.7	J	ND	U	NC	NC	NC
Nitrobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
N-Nitrosodi-n-propylamine	µg	ND	U	ND	U	ND	U	NC	NC	NC
N-Nitrosodiphenylamine	µg	ND	U	ND	U	ND	U	NC	NC	NC
Pentachlorophenol	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
Phenanthrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Phenol	µg	ND	U	ND	U/UJ	ND	U	NC	NC	NC
Pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
<b>Total</b>	µg	<b>2.23</b>		<b>8.74</b>		<b>0.00</b>		<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

**Notes:**

µg - Microgram

NC - Not calculated

Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.

Destruction efficiencies were also not calculated if the effluent result exceeded either influent result.

Total destruction efficiencies that include the estimated results of any individual compound will be considered an estimated value.

**Qualifiers:**

J - Result is estimated

U - below reported quantitation limit

UJ - Indicates the compound or analyte was analyzed for but not detected.

The sample detection limit is an estimated value.

\_-/\_ - Laboratory data qualifier

/\_-/\_ - Data validation qualifier

**Table 3.15**  
**Thermal Oxidizer 2 Results for Method TO-13 (SVOCs) - September 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	09/10/09								
		Therm-Ox 2				Destruction Efficiency				
		Influent		Influent Dup		Effluent		Low	High	Average
1,2,4-Trichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
1,2-Dichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
1,3-Dichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
1,4-Dichlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4,5-Trichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4,6-Trichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dichlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dimethylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dinitrophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,4-Dinitrotoluene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2,6-Dinitrotoluene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Chloronaphthalene	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Chlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Methylnaphthalene	µg	0.91	J	ND	U	ND	U	NC	NC	NC
2-Methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
2-Nitrophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
3,3'-Dichlorobenzidine	µg	ND	U	ND	U	ND	U	NC	NC	NC
3/4-Methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
3-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Bromophenyl phenyl ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Chloro-3-methylphenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Chloroaniline	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
4-Chlorophenyl phenyl ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Nitroaniline	µg	ND	U	ND	U	ND	U	NC	NC	NC
4-Nitrophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
Acenaphthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Acenaphthylene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[a]anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[a]pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[b]fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[g,h,i]perylene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Benzo[k]fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Bis(2-chloroethoxy)methane	µg	ND	U	ND	U	ND	U	NC	NC	NC
Bis(2-chloroethyl)ether	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Bis(2-chloroisopropyl)ether	µg	ND	U	ND	U	ND	U	NC	NC	NC
Bis(2-ethylhexyl)phthalate	µg	ND	U	1.5	J	ND	U	NC	NC	NC
Butyl benzyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Carbazole	µg	ND	U	ND	U	ND	U	NC	NC	NC
Chrysene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dibenz[a,h]anthracene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dibenzofuran	µg	ND	U	ND	U	ND	U	NC	NC	NC
Diethyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Dimethyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Di-n-butyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Di-n-octyl phthalate	µg	ND	U	ND	U	ND	U	NC	NC	NC
Fluoranthene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Fluorene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachlorobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachlorobutadiene	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
Hexachlorocyclopentadiene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Hexachloroethane	µg	ND	U	ND	U	ND	U	NC	NC	NC

**Table 3.15**  
**Thermal Oxidizer 2 Results for Method TO-13 (SVOCs) - September 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	09/10/09								
		Therm-Ox 2				Destruction Efficiency				
		Influent		Influent Dup		Effluent		Low	High	Average
Indeno[1,2,3cd]pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Isophorone	µg	2.9	J	ND	U	ND	U	NC	NC	NC
Naphthalene	µg	3.5		1.5		ND	U	NC	NC	NC
Nitrobenzene	µg	ND	U	ND	U	ND	U	NC	NC	NC
N-Nitrosodi-n-propylamine	µg	ND	U/UJ	ND	U/UJ	ND	U/UJ	NC	NC	NC
N-Nitrosodiphenylamine	µg	ND	U	ND	U	ND	U	NC	NC	NC
Pentachlorophenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
Phenanthrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
Phenol	µg	ND	U	ND	U	ND	U	NC	NC	NC
Pyrene	µg	ND	U	ND	U	ND	U	NC	NC	NC
<b>Total</b>	µg	<b>7.31</b>		<b>3.00</b>		<b>0.00</b>		<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

**Notes:**

µg - Microgram

NC - Not calculated

Destruction efficiencies were not calculated if either the influent or effluent samples were estimated.

Destruction efficiencies were also not calculated if the effluent result exceeded either influent result.

Total destruction efficiencies that include the estimated results of any individual compound will be considered an estimated value.

**Qualifiers:**

J - Result is estimated

U - below reported quantitation limit

UJ - Indicates the compound or analyte was analyzed for but not detected.

The sample detection limit is an estimated value.

\_-/ - Laboratory data qualifier

/\_- Data validation qualifier

**Table 3.16**  
**SBPA and Off-Site ISVE System Results**  
**for Method TO-13 (SVOCs) - July 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	07/09/09			
		SBPA ISVE		Off-Site ISVE	
1,2,4-Trichlorobenzene	µg	ND	U	ND	U
1,2-Dichlorobenzene	µg	2.1	J	1.6	J
1,3-Dichlorobenzene	µg	ND	U	ND	U
1,4-Dichlorobenzene	µg	ND	U	ND	U
2,4,5-Trichlorophenol	µg	ND	U	ND	U
2,4,6-Trichlorophenol	µg	ND	U	ND	U
2,4-Dichlorophenol	µg	ND	U	ND	U
2,4-Dimethylphenol	µg	ND	U	ND	U
2,4-Dinitrophenol	µg	ND	U	ND	U
2,4-Dinitrotoluene	µg	ND	U	ND	U
2,6-Dinitrotoluene	µg	ND	U	ND	U
2-Chloronaphthalene	µg	ND	U	ND	U
2-Chlorophenol	µg	ND	U	ND	U
2-Methylnaphthalene	µg	ND	U	ND	U
2-Methylphenol	µg	ND	U	ND	U
2-Nitroaniline	µg	ND	U	ND	U
2-Nitrophenol	µg	ND	U	ND	U
3,3'-Dichlorobenzidine	µg	ND	U	ND	U
3/4-Methylphenol	µg	ND	U	ND	U
3-Nitroaniline	µg	ND	U	ND	U
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U
4-Bromophenyl phenyl ether	µg	ND	U	ND	U
4-Chloro-3-methylphenol	µg	ND	U	ND	U
4-Chloroaniline	µg	ND	U	ND	U
4-Chlorophenyl phenyl ether	µg	ND	U	ND	U
4-Nitroaniline	µg	ND	U	ND	U
4-Nitrophenol	µg	ND	U	ND	U
Acenaphthene	µg	ND	U	ND	U
Acenaphthylene	µg	ND	U	ND	U
Anthracene	µg	ND	U	ND	U
Benzo[a]anthracene	µg	ND	U	ND	U
Benzo[a]pyrene	µg	ND	U	ND	U
Benzo[b]fluoranthene	µg	ND	U	ND	U
Benzo[g,h,i]perylene	µg	ND	U	ND	U
Benzo[k]fluoranthene	µg	ND	U	ND	U
Bis(2-chloroethoxy)methane	µg	ND	U	ND	U
Bis(2-chloroethyl)ether	µg	ND	U	ND	U
Bis(2-chloroisopropyl)ether	µg	ND	U	ND	U
Bis(2-ethylhexyl)phthalate	µg	ND	U	ND	U
Butyl benzyl phthalate	µg	ND	U	ND	U
Carbazole	µg	ND	U	ND	U
Chrysene	µg	ND	U	ND	U
Dibenz[a,h]anthracene	µg	ND	U	ND	U
Dibenzofuran	µg	ND	U	ND	U
Diethyl phthalate	µg	ND	U	ND	U
Dimethyl phthalate	µg	ND	U	ND	U
Di-n-butyl phthalate	µg	ND	U	ND	U
Di-n-octyl phthalate	µg	ND	U	ND	U
Fluoranthene	µg	ND	U	ND	U
Fluorene	µg	ND	U	ND	U
Hexachlorobenzene	µg	ND	U	ND	U
Hexachlorobutadiene	µg	ND	U	ND	U
Hexachlorocyclopentadiene	µg	ND	U	ND	U
Hexachloroethane	µg	ND	U	ND	U

**Table 3.16**  
**SBPA and Off-Site ISVE System Results**  
**for Method TO-13 (SVOCs) - July 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	07/09/09			
		SBPA ISVE		Off-Site ISVE	
Indeno[1,2,3cd]pyrene	µg	ND	U	ND	U
Isophorone	µg	ND	U	1.6	J
Naphthalene	µg	ND	U	2.7	
Nitrobenzene	µg	ND	U	ND	U
N-Nitrosodi-n-propylamine	µg	ND	U	ND	U
N-Nitrosodiphenylamine	µg	ND	U	ND	U
Pentachlorophenol	µg	ND	U	ND	U
Phenanthrone	µg	ND	U	ND	U
Phenol	µg	ND	U	ND	U
Pyrene	µg	ND	U	ND	U
<b>Total</b>	<b>µg</b>	<b>2.10</b>		<b>5.90</b>	

**Notes:**

µg - Microgram

NC - Not calculated

**Qualifiers:**

J - Result is estimated

U - below reported quantitation limit

\_- - Laboratory data qualifier

/\_- - Data validation qualifier

**Table 3.17**  
**SBPA and Off-Site ISVE System Results**  
**for Method TO-13 (SVOCs) - August 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	08/06/09			
		SBPA ISVE		Off-Site ISVE	
1,2,4-Trichlorobenzene	µg	ND	U	ND	U
1,2-Dichlorobenzene	µg	5.7	J	ND	U
1,3-Dichlorobenzene	µg	ND	U	ND	U
1,4-Dichlorobenzene	µg	1.6	J	ND	U
2,4,5-Trichlorophenol	µg	ND	U	ND	U/UJ
2,4,6-Trichlorophenol	µg	ND	U	ND	U/UJ
2,4-Dichlorophenol	µg	ND	U	ND	U/UJ
2,4-Dimethylphenol	µg	ND	U	ND	U/UJ
2,4-Dinitrophenol	µg	ND	U/UJ	ND	U/UJ
2,4-Dinitrotoluene	µg	ND	U	ND	U
2,6-Dinitrotoluene	µg	ND	U	ND	U
2-Chloronaphthalene	µg	ND	U	ND	U
2-Chlorophenol	µg	ND	U	ND	U/UJ
2-Methylnaphthalene	µg	ND	U	ND	U
2-Methylphenol	µg	ND	U	ND	U/UJ
2-Nitroaniline	µg	ND	U	ND	U
2-Nitrophenol	µg	ND	U	ND	U/UJ
3,3'-Dichlorobenzidine	µg	ND	U	ND	U
3/4-Methylphenol	µg	ND	U	ND	U/UJ
3-Nitroaniline	µg	ND	U	ND	U
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U/UJ
4-Bromophenyl phenyl ether	µg	ND	U	ND	U
4-Chloro-3-methylphenol	µg	ND	U	ND	U/UJ
4-Chloroaniline	µg	ND	U	ND	U
4-Chlorophenyl phenyl ether	µg	ND	U	ND	U
4-Nitroaniline	µg	ND	U	ND	U
4-Nitrophenol	µg	ND	U	ND	U/UJ
Acenaphthene	µg	ND	U	ND	U
Acenaphthylene	µg	ND	U	ND	U
Anthracene	µg	ND	U	ND	U
Benzo[a]anthracene	µg	ND	U	ND	U
Benzo[a]pyrene	µg	ND	U	ND	U
Benzo[b]fluoranthene	µg	ND	U	ND	U
Benzo[g,h,i]perylene	µg	ND	U	ND	U
Benzo[k]fluoranthene	µg	ND	U	ND	U
Bis(2-chloroethoxy)methane	µg	ND	U	ND	U
Bis(2-chloroethyl)ether	µg	ND	U/UJ	ND	U/UJ
Bis(2-chloroisopropyl)ether	µg	ND	U	ND	U
Bis(2-ethylhexyl)phthalate	µg	ND	U	ND	U
Butyl benzyl phthalate	µg	ND	U	ND	U
Carbazole	µg	ND	U	ND	U
Chrysene	µg	ND	U	ND	U
Dibenz[a,h]anthracene	µg	ND	U	ND	U
Dibenzofuran	µg	ND	U	ND	U
Diethyl phthalate	µg	ND	U	ND	U
Dimethyl phthalate	µg	ND	U	ND	U
Di-n-butyl phthalate	µg	ND	U	ND	U
Di-n-octyl phthalate	µg	ND	U	ND	U
Fluoranthene	µg	ND	U	ND	U
Fluorene	µg	ND	U	ND	U
Hexachlorobenzene	µg	ND	U	ND	U
Hexachlorobutadiene	µg	0.98	J	ND	U
Hexachlorocyclopentadiene	µg	ND	U	ND	U
Hexachloroethane	µg	ND	U	ND	U

**Table 3.17**  
**SBPA and Off-Site ISVE System Results**  
**for Method TO-13 (SVOCs) - August 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	08/06/09			
		SBPA ISVE		Off-Site ISVE	
Indeno[1,2,3cd]pyrene	µg	ND	U	ND	U
Isophorone	µg	ND	U	ND	U
Naphthalene	µg	1.3		1.7	
Nitrobenzene	µg	ND	U	ND	U
N-Nitrosodi-n-propylamine	µg	ND	U	ND	U
N-Nitrosodiphenylamine	µg	ND	U	ND	U
Pentachlorophenol	µg	ND	U	ND	U/UJ
Phenanthrene	µg	ND	U	ND	U
Phenol	µg	ND	U	ND	U/UJ
Pyrene	µg	ND	U	ND	U
<b>Total</b>	<b>µg</b>	<b>9.58</b>		<b>1.70</b>	

**Notes:**

µg - Microgram

NC - Not calculated

**Qualifiers:**

J - Result is estimated

U - below reported quantitation limit

UJ - Indicates the compound or analyte was analyzed for but not detected.

The sample detection limit is an estimated value.

/\_ - Laboratory data qualifier

/\_ - Data validation qualifier

**Table 3.18**  
**SBPA and Off-Site ISVE System Results**  
**for Method TO-13 (SVOCs) - September 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	09/10/09			
		SBPA ISVE		Off-Site ISVE	
1,2,4-Trichlorobenzene	µg	ND	U	ND	U
1,2-Dichlorobenzene	µg	2.8	J	ND	U
1,3-Dichlorobenzene	µg	ND	U	ND	U
1,4-Dichlorobenzene	µg	ND	U	ND	U
2,4,5-Trichlorophenol	µg	ND	U	ND	U/UJ
2,4,6-Trichlorophenol	µg	ND	U	ND	U/UJ
2,4-Dichlorophenol	µg	ND	U	ND	U
2,4-Dimethylphenol	µg	ND	U	ND	U
2,4-Dinitrophenol	µg	ND	U	ND	U/UJ
2,4-Dinitrotoluene	µg	ND	U	ND	U/UJ
2,6-Dinitrotoluene	µg	ND	U	ND	U/UJ
2-Chloronaphthalene	µg	ND	U	ND	U/UJ
2-Chlorophenol	µg	ND	U	ND	U
2-Methylnaphthalene	µg	ND	U	ND	U
2-Methylphenol	µg	ND	U	ND	U
2-Nitroaniline	µg	ND	U	ND	U/UJ
2-Nitrophenol	µg	ND	U	ND	U
3,3'-Dichlorobenzidine	µg	ND	U	ND	U
3/4-Methylphenol	µg	ND	U	ND	U
3-Nitroaniline	µg	ND	U	ND	U/UJ
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U
4-Bromophenyl phenyl ether	µg	ND	U	ND	U
4-Chloro-3-methylphenol	µg	ND	U	ND	U
4-Chloroaniline	µg	ND	U/UJ	ND	U/UJ
4-Chlorophenyl phenyl ether	µg	ND	U	ND	U/UJ
4-Nitroaniline	µg	ND	U	ND	U/UJ
4-Nitrophenol	µg	ND	U	ND	U/UJ
Acenaphthene	µg	ND	U	ND	U/UJ
Acenaphthylene	µg	ND	U	ND	U/UJ
Anthracene	µg	ND	U	ND	U
Benzo[a]anthracene	µg	ND	U	ND	U
Benzo[a]pyrene	µg	ND	U	ND	U
Benzo[b]fluoranthene	µg	ND	U	ND	U
Benzo[g,h,i]perylene	µg	ND	U	ND	U
Benzo[k]fluoranthene	µg	ND	U	ND	U
Bis(2-chloroethoxy)methane	µg	ND	U	ND	U
Bis(2-chloroethyl)ether	µg	ND	U/UJ	ND	U/UJ
Bis(2-chloroisopropyl)ether	µg	ND	U	ND	U
Bis(2-ethylhexyl)phthalate	µg	2.5	J	ND	U
Butyl benzyl phthalate	µg	ND	U	ND	U
Carbazole	µg	ND	U	ND	U
Chrysene	µg	ND	U	ND	U
Dibenz[a,h]anthracene	µg	ND	U	ND	U
Dibenzofuran	µg	ND	U	ND	U/UJ
Diethyl phthalate	µg	ND	U	ND	U/UJ
Dimethyl phthalate	µg	ND	U	ND	U/UJ
Di-n-butyl phthalate	µg	ND	U	ND	U
Di-n-octyl phthalate	µg	ND	U	ND	U
Fluoranthene	µg	ND	U	ND	U
Fluorene	µg	ND	U	ND	U/UJ
Hexachlorobenzene	µg	ND	U	ND	U
Hexachlorobutadiene	µg	ND	U/UJ	ND	U/UJ
Hexachlorocyclopentadiene	µg	ND	U	ND	U/UJ
Hexachloroethane	µg	ND	U	ND	U

**Table 3.18**  
**SBPA and Off-Site ISVE System Results**  
**for Method TO-13 (SVOCs) - September 2009**  
**American Chemical Service**  
**Griffith, Indiana**

Compounds	Units	09/10/09			
		SBPA ISVE		Off-Site ISVE	
Indeno[1,2,3cd]pyrene	µg	ND	U	ND	U
Isophorone	µg	ND	U	ND	U
Naphthalene	µg	1.5		2.9	
Nitrobenzene	µg	ND	U	ND	U
N-Nitrosodi-n-propylamine	µg	ND	U	ND	U/UJ
N-Nitrosodiphenylamine	µg	ND	U	ND	U
Pentachlorophenol	µg	ND	U	ND	U
Phenanthrene	µg	ND	U	ND	U
Phenol	µg	ND	U	ND	U
Pyrene	µg	ND	U	ND	U
<b>Total</b>	<b>µg</b>	<b>6.80</b>		<b>2.90</b>	

**Notes:**

µg - Microgram

NC - Not calculated

**Qualifiers:**

J - Result is estimated

U - below reported quantitation limit

UJ - Indicates the compound or analyte was analyzed for but not detected.

The sample detection limit is an estimated value.

\_-/- Laboratory data qualifier

/\_- Data validation qualifier

**Table 3.19**  
**Off-Site In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data**  
**Third Quarter 2009**  
**American Chemical Service NPL Site**  
**Griffith, Indiana**

Well ID	Date	Flow (cfm)	Vac ( $\text{" H}_2\text{O}$ )	VOCs (ppm)	Comments
SVE-01	7/24/2009	23	56.5	31	
	8/20/2009	6	63.5	62	
	9/30/2009	Water	74.5	15	
SVE-02	7/24/2009	3	55.5	28	
	8/20/2009	21	63.0	59	
	9/30/2009	27	74.5	20	
SVE-03	7/24/2009	4	56.5	22	
	8/20/2009	18	63.0	51	
	9/30/2009	26	74.5	4	
SVE-04	7/24/2009	2	56.5	26	
	8/20/2009	Water	63.0	47	
	9/30/2009	Water	65.0	3	
SVE-05	7/24/2009	99	55.0	37	
	8/20/2009	51	28.0	72	
	9/30/2009	23	35.0	20	
SVE-06	7/24/2009	Water	56.5	36	
	8/20/2009	Water	63.5	71	
	9/30/2009	Water	74.5	25	
SVE-07	7/24/2009	Water	56.0	26	
	8/20/2009	Water	61.0	15	
	9/30/2009	Water	63.0	3	
SVE-08	7/24/2009	Water	56.5	28	
	8/20/2009	Water	60.5	26	
	9/30/2009	Water	75.0	3	
SVE-09	7/24/2009	170	55.0	35	
	8/20/2009	38	17.0	70	
	9/30/2009	49	20.0	6	
SVE-10	7/24/2009	Water	55.0	35	
	8/20/2009	Water	63.0	111	
	9/30/2009	Water	69.0	11	
SVE-11	7/24/2009	159	56.0	37	
	8/20/2009	43	17.0	65	
	9/30/2009	48	20.0	7	
SVE-12	7/24/2009	Water	55.0	29	
	8/20/2009	Water	63.0	44	
	9/30/2009	Water	73.5	5	
SVE-13	7/24/2009	3	54.0	167	
	8/20/2009	17	61.0	100	
	9/30/2009	6	72.0	240	

**Table 3.19**  
**Off-Site In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data**  
**Third Quarter 2009**  
**American Chemical Service NPL Site**  
**Griffith, Indiana**

Well ID	Date	Flow (cfm)	Vac ( $\text{" H}_2\text{O}$ )	VOCs (ppm)	Comments
SVE-14	7/24/2009	Water	55.0	101	
	8/20/2009	17	61.0	107	
	9/30/2009	Water	72.5	210	
SVE-15	7/24/2009	14	55.5	40	
	8/20/2009	Water	62.0	59	
	9/30/2009	Water	73.0	25	
SVE-16	7/24/2009	91	52.0	34	
	8/20/2009	56	37.5	74	
	9/30/2009	Water	50.0	40	
SVE-17	7/24/2009	Water	55.0	38	
	8/20/2009	Water	61.0	79	
	9/30/2009	Water	72.5	45	
SVE-18	7/24/2009	Water	53.5	44	
	8/20/2009	Water	59.5	74	
	9/30/2009	Water	69.5	200	
SVE-19	7/24/2009	113	53.0	31	
	8/20/2009	50	33.5	72	
	9/30/2009	60	47.0	35	
SVE-20	7/24/2009	Water	54.0	32	
	8/20/2009	32	60.5	71	
	9/30/2009	Water	71.5	30	
SVE-21	7/24/2009	109	55.0	28	
	8/20/2009	51	35.0	72	
	9/30/2009	9	42.5	25	
SVE-22	7/24/2009	23	37.5	102	
	8/20/2009	171	34.0	114	
	9/30/2009	Water	65.0	230	
SVE-23	7/24/2009	23	57.0	114	
	8/20/2009	8	61.5	156	
	9/30/2009	Water	73.5	240	
SVE-24	7/24/2009	Water	54.5	73	
	8/20/2009	Water	60.5	71	
	9/30/2009	Water	72.0	66	
SVE-25	7/24/2009	73	53.5	58	
	8/20/2009	Water	42.5	134	
	9/30/2009	Water	49.5	200	
SVE-26	7/24/2009	8	57.0	30	
	8/20/2009	11	63.0	46	
	9/30/2009	14	73.5	22	

**Table 3.19**  
**Off-Site In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data**  
**Third Quarter 2009**  
**American Chemical Service NPL Site**  
**Griffith, Indiana**

Well ID	Date	Flow (cfm)	Vac ( $\text{" H}_2\text{O}$ )	VOCs (ppm)	Comments
SVE-27	7/24/2009	Water	55.5	82	
	8/20/2009	176	61.0	152	
	9/30/2009	221	72.5	160	
SVE-28	7/24/2009	27	54.5	134	
	8/20/2009	37	61.0	183	
	9/30/2009	53	71.5	220	
SVE-29	7/24/2009	53	54.5	100	
	8/20/2009	40	43.0	154	
	9/30/2009	40	49.5	180	
SVE-30	7/24/2009	3	54.5	190	
	8/20/2009	16	61.0	120	
	9/30/2009	10	73.5	190	
SVE-31	7/24/2009	3	54.5	100	
	8/20/2009	Water	60.5	74	
	9/30/2009	Water	70.5	55	
SVE-32	7/24/2009	8	54.5	100	
	8/20/2009	11	60.5	78	
	9/30/2009	Water	67.5	30	
SVE-33	7/24/2009	7	56.0	75	
	8/20/2009	18	61.0	91	
	9/30/2009	15	73.5	60	
SVE-34	7/24/2009	21	56.5	135	
	8/20/2009	8	61.0	88	
	9/30/2009	14	73.5	160	
SVE-35	7/24/2009	35	36.5	85	
	8/20/2009	31	30.5	103	
	9/30/2009	10	38.0	70	
SVE-36	7/24/2009	3	54.0	180	
	8/20/2009	15	60.5	150	
	9/30/2009	14	71.5	140	
SVE-37	7/24/2009	19	54.0	100	
	8/20/2009	15	60.5	119	
	9/30/2009	18	71.5	75	
SVE-38	7/24/2009	99	54.0	310	
	8/20/2009	38	47.0	179	
	9/30/2009	18	67.5	130	
SVE-39	7/24/2009	131	33.5	110	
	8/20/2009	18	21.0	112	
	9/30/2009	58	25.5	85	

**Table 3.19**  
**Off-Site In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data**  
**Third Quarter 2009**  
**American Chemical Service NPL Site**  
**Griffith, Indiana**

Well ID	Date	Flow (cfm)	Vac ( $\text{" H}_2\text{O}$ )	VOCs (ppm)	Comments
SVE-40	7/24/2009	3	56.5	230	
	8/20/2009	20	61.0	174	
	9/30/2009	Water	73.5	135	
SVE-41	7/24/2009	Water	33.0	155	
	8/20/2009	162	33.5	131	
	9/30/2009	Water	70.0	90	
SVE-42	7/24/2009	2	54.0	145	
	8/20/2009	12	60.5	153	
	9/30/2009	17	71.5	105	
K-P Header 1	7/24/2009	-	56.0	31	
	8/20/2009	-	63.0	54	
	9/30/2009	-	75.5	50	
K-P Header 2	7/24/2009	-	65.5	25	
	8/20/2009	-	63.5	66	
	9/30/2009	-	73.5	55	
OFCA Header 1	7/24/2009	-	55.5	26	
	8/20/2009	-	61.5	52	
	9/30/2009	-	72.5	60	
OFCA Header 2	7/24/2009	-	55.0	28	
	8/20/2009	-	61.0	73	
	9/30/2009	-	71.5	65	
OFCA Header 3	7/24/2009	-	57	39	
	8/20/2009	-	61.5	79	
	9/30/2009	-	73.5	75	

**Notes:**

"-" = data not collected

"Water" = water present in vapor stream, preventing data collection

Flow is measured using a VelociCalc 8384 flow meter.

Vacuum pressures are measured with an Extech Manometer Model 407910.

**Table 3.20**  
**Off-Site In-Situ Soil Vapor Extraction (ISVE) System Header Monitoring Data**  
**Third Quarter 2009**  
**American Chemical Service NPL Site**  
**Griffith, Indiana**

Date	KP1 Line Press (psia)	KP1 Flow (scfm)	KP1 Vac ( <sup>"</sup> H <sub>2</sub> O)	KP2 Line Press (psia)	KP2 Flow (scfm)	KP2 Vac ( <sup>"</sup> H <sub>2</sub> O)	OFCA1 Vac ( <sup>"</sup> H <sub>2</sub> O)	OFCA2 Vac ( <sup>"</sup> H <sub>2</sub> O)	OFCA3 Vac ( <sup>"</sup> H <sub>2</sub> O)	Dilution Flow (cfm)	Blower Inf Line Press (psia)	Blower Inf Flow (scfm)
7/24/2009	12.7	0	56	12.6	0	56.5	55.5	55	57	0	12.4	868
8/20/2009	12.3	704	63	12.3	0	63.5	61.5	61	61.5	0	12.1	780
9/30/2009	12.1	0	75.5	12.1	0	73.5	72.5	71.5	73.5	0	11.9	601

Date	Blower Inf Vac ( <sup>"</sup> H <sub>2</sub> O)	Blower Inf VOC (ppm)	Blower Inf Temp. ( <sup>°</sup> F)	Blower Eff Line Press (psia)	Blower Eff Flow (scfm)	Blower Eff Press ( <sup>"</sup> H <sub>2</sub> O)	Blower Eff VOC (ppm)	Blower Eff Temp. ( <sup>°</sup> F)	Filter Diff Press ( <sup>"</sup> H <sub>2</sub> O)	Ambient Temperature ( <sup>°</sup> F)	Barometric Pressure ( <sup>"</sup> Hg)	Humidity (%)
7/24/2009	62.5	-	76	15.6	748	24.5	37	144	9.0	82	29.89	48%
8/20/2009	69	-	78	15.4	740	22.0	76	148	9.0	72	29.66	83%
9/30/2009	80	-	76	15.6	0	22.5	55	152	8.0	54	30.13	72%

**Notes:**

"-" = Data not collected

cfm = Cubic feet per minute

" H<sub>2</sub>O = Inches of water

ppm = Parts per million

VOCs = Volatile organic compounds

psia = Pounds per square inch, atmosphere

" Hg = Inches of mercury

<sup>°</sup>F = Degrees Fahrenheit

**Table 3.21**  
**SBPA In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data**  
**Third Quarter 2009**  
**American Chemical Service NPL Site**  
**Griffith, Indiana**

Well ID	Date	Flow (cfm)	Vac ( $\text{" H}_2\text{O}$ )	VOCs (ppm)	Comments
SVE-43	7/24/2009	9	44.5	14	
	8/20/2009	12	51.0	110	
	9/30/2009	18	66.0	156	
SVE-44	7/24/2009	18	45.0	23	
	8/20/2009	28	51.0	130	
	9/30/2009	Water	65.5	129	
SVE-45	7/24/2009	20	43.5	17	
	8/20/2009	17	50.0	115	
	9/30/2009	21	66.0	181	
SVE-46	7/24/2009	4	44.5	18	
	8/20/2009	12	51.0	100	
	9/30/2009	32	66.0	251	
SVE-47	7/24/2009	5	43.5	109	
	8/20/2009	10	50.5	120	
	9/30/2009	29	66.5	195	
SVE-48	7/24/2009	12	44.5	92	
	8/20/2009	6	51.0	200	
	9/30/2009	9	66.0	228	
SVE-49	7/24/2009	11	44.5	75	
	8/20/2009	9	51.0	170	
	9/30/2009	19	65.5	247	
SVE-50	7/24/2009	4	44.0	24	
	8/20/2009	12	51.0	180	
	9/30/2009	30	65.5	115	
SVE-51	7/24/2009	8	43.0	27	
	8/20/2009	10	50.0	170	
	9/30/2009	33	65.5	118	
SVE-52	7/24/2009	3	44.5	50	
	8/20/2009	10	51.0	100	
	9/30/2009	30	65.5	278	
SVE-53	7/24/2009	2	44.5	111	
	8/20/2009	6	51.0	330	
	9/30/2009	21	66.5	264	
SVE-54	7/24/2009	9	44.5	106	
	8/20/2009	8	51.0	400	
	9/30/2009	32	65.5	504	
SVE-55	7/24/2009	17	43.5	78	
	8/20/2009	22	50.5	120	
	9/30/2009	25	65.5	416	
SVE-56	7/24/2009	19	43.5	89	
	8/20/2009	15	50.5	220	
	9/30/2009	31	66.5	72	
SVE-57	7/24/2009	9	44.5	69	
	8/20/2009	8	51.0	160	
	9/30/2009	10	66.5	78	
SVE-58	7/24/2009	9	46.5	121	
	8/20/2009	10	53.0	150	
	9/30/2009	27	67.5	119	

**Table 3.21**  
**SBPA In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data**  
**Third Quarter 2009**  
**American Chemical Service NPL Site**  
**Griffith, Indiana**

Well ID	Date	Flow (cfm)	Vac ( $\text{" H}_2\text{O}$ )	VOCs (ppm)	Comments
SVE-59	7/24/2009	14	44.5	27	
	8/20/2009	10	51.0	170	
	9/30/2009	Water	65.0	126	
SVE-60	7/24/2009	17	47.0	136	
	8/20/2009	9	53.0	310	
	9/30/2009	22	67.0	204	
SVE-61	7/24/2009	8	44.5	101	
	8/20/2009	12	51.0	200	
	9/30/2009	16	67.0	133	
SVE-62	7/24/2009	5	44.5	192	
	8/20/2009	10	51.0	280	
	9/30/2009	32	67.0	104	
SVE-63	7/24/2009	3	43.0	185	
	8/20/2009	100	45.5	330	
	9/30/2009	7	63.0	210	
SVE-64	7/24/2009	7	44.5	169	
	8/20/2009	8	51.0	260	
	9/30/2009	5	66.5	176	
SVE-65	7/24/2009	9	44.5	139	
	8/20/2009	6	51.0	250	
	9/30/2009	24	66.0	164	
SVE-66	7/24/2009	4	44.5	127	
	8/20/2009	13	51.0	170	
	9/30/2009	Water	66.0	83	
SVE-67	7/24/2009	27	44.5	62	
	8/20/2009	18	43.0	130	
	9/30/2009	18	61.0	112	
SVE-68	7/24/2009	47	43.5	61	
	8/20/2009	3	13.5	140	
	9/30/2009	21	33.0	93	
SVE-69	7/24/2009	NM	NM	NM	Down for repairs
	8/20/2009	NM	NM	NM	Down for repairs
	9/30/2009	25	65.0	76	
SVE-70	7/24/2009	35	46.0	113	
	8/20/2009	24	16.0	110	
	9/30/2009	28	1.5	107	
SVE-71	7/24/2009	14	47.0	69	
	8/20/2009	12	53.0	310	
	9/30/2009	39	67.0	229	
SVE-72	7/24/2009	4	46.5	183	
	8/20/2009	8	53.0	305	
	9/30/2009	24	67.5	123	
SVE-73	7/24/2009	22	47.0	148	
	8/20/2009	12	53.0	10	
	9/30/2009	18	67.0	58	
SVE-74	7/24/2009	12	46.5	133	
	8/20/2009	11	53.0	50	
	9/30/2009	26	66.5	136	

**Table 3.21**  
**SBPA In-Situ Soil Vapor Extraction (ISVE) System Well Monitoring Data**  
**Third Quarter 2009**  
**American Chemical Service NPL Site**  
**Griffith, Indiana**

Well ID	Date	Flow (cfm)	Vac ( $\text{" H}_2\text{O}$ )	VOCs (ppm)	Comments
SVE-75	7/24/2009	51	43.5	56	
	8/20/2009	12	50.5	90	
	9/30/2009	27	65.5	171	
SVE-76	7/24/2009	Water	43.5	112	
	8/20/2009	25	50.0	150	
	9/30/2009	Water	66.5	69	
SVE-77	7/24/2009	12	44.5	68	
	8/20/2009	17	51.0	100	
	9/30/2009	47	67.0	108	
SVE-78	7/24/2009	13	44.5	70	
	8/20/2009	5	51.0	130	
	9/30/2009	24	66.5	93	
SVE-79	7/24/2009	5	47.0	89	
	8/20/2009	15	53.0	140	
	9/30/2009	16	67.5	134	
SVE-80	7/24/2009	10	46.5	79	
	8/20/2009	12	53.0	170	
	9/30/2009	34	67.0	131	
SVE-81	7/24/2009	3	46.5	252	
	8/20/2009	9	53.0	400	
	9/30/2009	30	67.5	151	
SVE-82	7/24/2009	2	47.0	62	
	8/20/2009	10	53.0	240	
	9/30/2009	9	67.5	178	
SVE-83	7/24/2009	7	46.5	260	
	8/20/2009	9	53.0	130	
	9/30/2009	38	67.5	126	
SVE-84	7/24/2009	18	47.0	192	
	8/20/2009	13	53.0	60	
	9/30/2009	33	67.5	86	
SVE-85	7/24/2009	13	47.0	106	
	8/20/2009	10	53.0	110	
	9/30/2009	28	67.0	167	
SVE-86	7/24/2009	11	46.5	138	
	8/20/2009	10	53.0	75	
	9/30/2009	19	67.0	120	
SVE-87	7/24/2009	15	47.0	127	
	8/20/2009	12	53.0	100	
	9/30/2009	34	67.0	157	
SVE-88	7/24/2009	4	46.5	154	
	8/20/2009	11	53	5	
	9/30/2009	15	67	57	

**Notes:**

"-" = data not collected

"Water" = water present in vapor stream, preventing data collection

Flow is measured using a VelociCalc 8384 flow meter.

Vacuum pressures are measured with an Extech Manometer Model 407910.

**Table 3.22**  
**SBPA In-Situ Soil Vapor Extraction (ISVE) System Header Monitoring Data**  
**Third Quarter 2009**  
**American Chemical Service NPL Site**  
**Griffith, Indiana**

Date	North Header			South Header			Dilution Flow (cfm)	Blower Inf Line Press (psia)	Blower Inf Flow (scfm)	Blower Inf Vac (" H <sub>2</sub> O)	Blower Inf VOC (ppm)
	Line Press (psia)	Flow (scfm)	Vac (" H <sub>2</sub> O)	Line Press (psia)	Flow (scfm)	Vac (" H <sub>2</sub> O)					
7/24/2009	13.1	0	43.5	13.0	0	47.0	0	11.1	3072	100	-
8/20/2009	12.7	726	51.0	12.7	1023	53.0	0	11.0	2404	100	-
9/30/2009	14.3	0	13.0	12.4	1751	67.5	0	11.2	1924	100	-

Date	Blower Inf Temp. (°F)	Blower Eff Line Press (psia)	Blower Eff Flow (scfm)	Blower Eff Press (" H <sub>2</sub> O)	Blower Eff VOC (ppm)	Blower Eff Temp. (°F)	Filter Diff Press (" H <sub>2</sub> O)	Ambient Temperature (°F)	Barometric Pressure ("Hg)	Humidity (%)
7/24/2009	62	16.3	1008	45.0	-	150	20.0	72	29.92	78%
8/20/2009	64	16.1	1068	43.0	-	153	20.0	68	29.66	94%
9/30/2009	65	16.4	1024	43.0	-	132	8.0	57	30.16	59%

**Notes:**

"-" = Data not collected

cfm = Cubic feet per minute

" H<sub>2</sub>O = Inches of water

ppm = Parts per million

VOCs = Volatile organic compounds

psia = Pounds per square inch, atmosphere

" Hg = Inches of mercury

°F = Degrees Fahrenheit

**Table 6.1**  
**Water Table Elevations Across the Barrier Wall and Near the PGCS - Third Quarter 2009**  
**American Chemical Service NPL Site**  
**Griffith, Indiana**

**Upper Aquifer Wells**

Well Designation	Reference Points			9/22/2009		Notes	Difference Across Barrier Wall (if applicable) <sup>1</sup>
	East	North	TOIC	Level	Elevation		
MW11	6377	7329	640.47	7.58	632.89		n/a
MW13	5050	7814	634.08	3.61	630.47		n/a
MW37	5395	7976	636.78	6.61	630.17		n/a
MW46	4526	7424	633.32	NM	NM	Could not locate	n/a
MW48	5669	7814	636.36	5.61	630.75		n/a
MW49	5551	7650	637.00	6.39	630.61		n/a

**Staff Gauges & Piezometers**

Well Designation	Reference Points			9/22/2009		Notes	Difference Across Barrier Wall (if applicable) <sup>1</sup>
	East	North	TOC/ TOSG	Level	Elevation		
P23	4689	7018	636.18	6.52	629.66		n/a
P25	5131	7510	633.33	3.35	629.98		n/a
P26	4764	7309	634.23	3.95	630.28		n/a
P27	4904	7020	639.70	10.61	629.09		n/a
P28	5883	7486	644.53	12.59	631.94		n/a
P32	5746	7026	642.32	10.48	631.84		n/a
P40	5931	7241	638.77	6.84	631.93		n/a
P41	5663	7377	637.23	5.79	631.44		n/a
P49	5145	6949	638.98	7.86	631.12		n/a
SG13	4819	7209	631.53	3.85	629.38	TOSG = 6.0' mark	n/a

**PGCS Piezometer Sets**

Well Designation	Reference Points			9/22/2009		Notes	Difference Across Barrier Wall (if applicable) <sup>1</sup>
	East	North	TOC	Level	Elevation		
P81	5577	7581	636.19	6.02	630.17		n/a
P82	5577	7572	635.77	6.04	629.73		n/a
P83	5577	7561.6	635.95	5.66	630.29		n/a
P84	5322	7603	634.35	4.53	629.82		n/a
P85	5326	7594	634.08	4.31	629.77		n/a
P86	5329	7585	634.41	4.79	629.62		n/a
P87	5121	7466	633.88	4.51	629.37		n/a
P88	5130	7460	633.90	4.49	629.41		n/a
P89	5137	7454	634.02	4.52	629.50		n/a
P90	4881	7152	634.45	5.18	629.27		n/a
P91	4889	7145	634.59	5.44	629.15		n/a
P92	4896	7138.1	633.87	4.81	629.06		n/a

**Table 6.1**  
**Water Table Elevations Across the Barrier Wall and Near the PGCS - Third Quarter 2009**  
**American Chemical Service NPL Site**  
**Griffith, Indiana**

**BWES Water Level and Piezometer Pairs**

Well Designation	Reference Points			9/22/2009		Notes	Difference Across Barrier Wall (if applicable) <sup>1</sup>
	East	North	TOC	Level	Elevation		
P93R - Outside BW	n/a	n/a	639.05	9.66	629.39	Installed Nov. 2004	1.69
P94R - Inside BW	n/a	n/a	640.99	9.91	631.08	Installed Nov. 2004	
P95 - Outside BW	5146	6532	638.58	DRY	DRY		n/a
P96 - Inside BW	5156	6537	641.26	15.38	625.88		
P105 - Outside BW	5885	6678	638.86	5.42	633.44		-3.23
P106 - Inside BW	5871	6685	638.10	7.89	630.21		
P107 - Outside BW	5766	7339	637.42	5.59	631.83		-0.22
P108 - Inside BW	5757	7324	638.13	6.52	631.61		
P109 - Outside BW	5740	6387	644.30	10.96	633.34		-5.70
P110 - Inside BW	5705	6382	647.68	20.04	627.64		
P111 - Outside BW	5551	5950	650.03	17.04	632.99		-6.12
P112 - Inside BW	5525	5960	653.36	26.49	626.87		
P113 - Inside BW	5309	5693	657.53	30.58	626.95		-5.48
ORCPZ102 - Outside BW	5331	5612	652.47	20.04	632.43		
P114 - Inside BW	5035	5729	653.69	26.57	627.12		-5.49
P115 - Outside BW	4970	5708	652.50	19.89	632.61		
P116 - Inside BW	5031	6087	646.26	19.49	626.77		-5.15
P117 - Outside BW	5014	6087	643.93	12.01	631.92		
P118 - Inside BW	5402	6539	645.52	18.73	626.79		n/a

**Notes:**

All depth measurements and elevations are in units of feet.

Elevation is in feet above mean sea level.

TOIC = top of inner casing

TOC = top of casing

TOSG = top of staff gauge

n/a = not applicable

I A positive value indicates that the water level is higher inside the barrier wall. A negative value indicates that the water level is lower inside the barrier wall.

**Table 6.2**  
**Water Levels Inside Barrier Wall - Third Quarter 2009**  
**American Chemical Service NPL Site**  
**Griffith, Indiana**

Date	On-Site Area					
	Target Level	P-29	P-31	P-32	P-36	P-49
7/10/2009	629.0	630.4	630.9	632.2	628.0	631.4
7/24/2009	629.0	630.4	630.9	632.0	627.9	630.8
8/21/2009	629.0	630.4	630.9	631.6	626.2	630.2
9/4/2009	629.0	630.4	630.9	632.3	628.0	631.7

Date	Off-Site Area										
	Target Level	P-96	P-110	P-112	P-113	P-114	P-116	P-118	AS-7	AS-8	AS-9
7/10/2009	626.0	621.7	627.7	626.9	626.8	627.0	626.7	627.1	NM	NM	NM
7/24/2009	626.0	621.5	626.9	626.7	626.9	627.2	627.0	626.8	628.75	628.60	629.31
8/19/2009	626.0	NM	628.16	627.75	NM						
8/21/2009	626.0	621.3	627.2	626.7	627.1	627.6	627.3	626.6	NM	NM	NM
9/4/2009	626.0	622.2	627.5	626.8	626.8	626.9	626.5	626.6	NM	NM	NM
9/30/2009	626.0	NM	628.53	628.75	626.35						

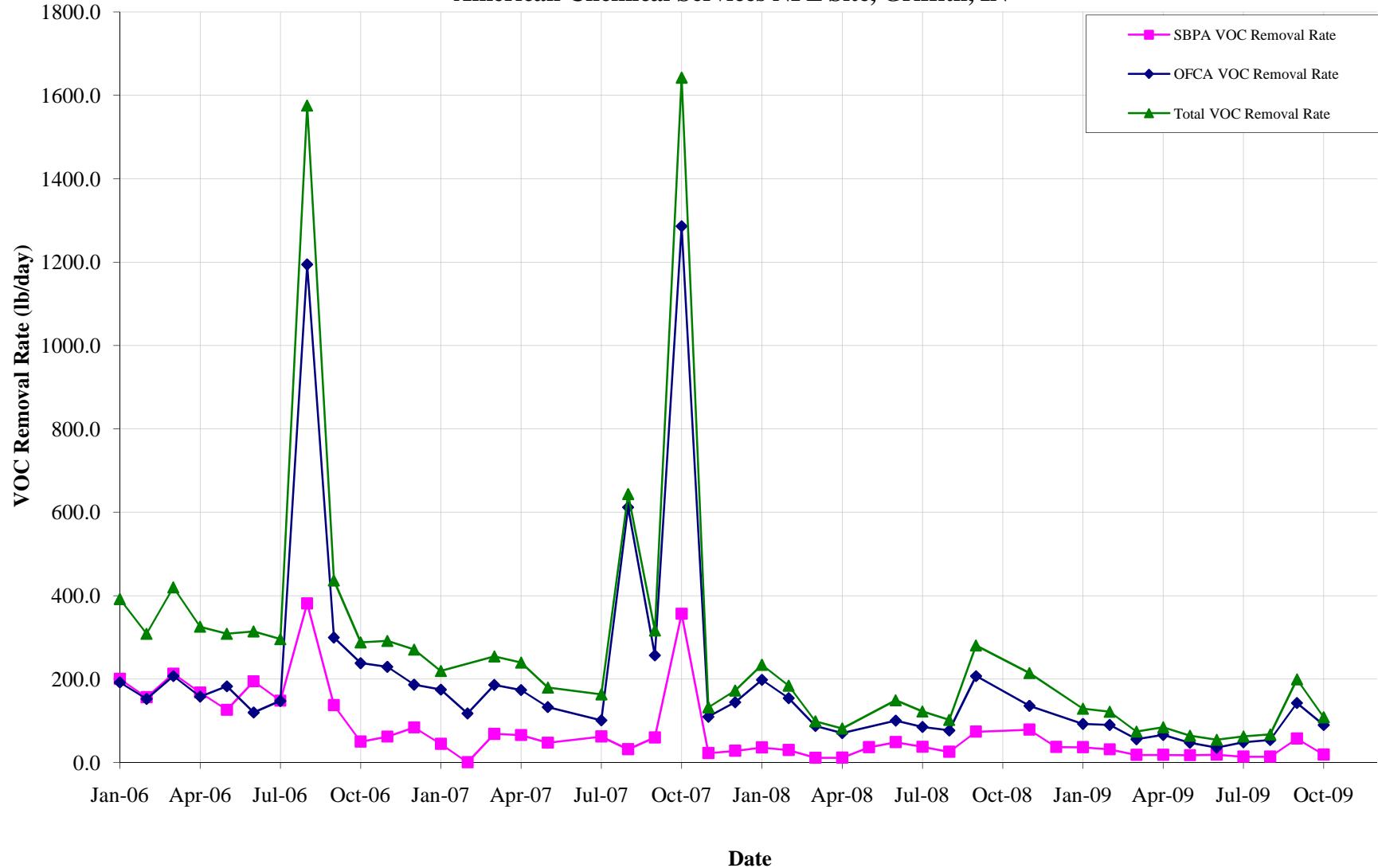
**Notes:**

All water level elevations are in feet AMSL.

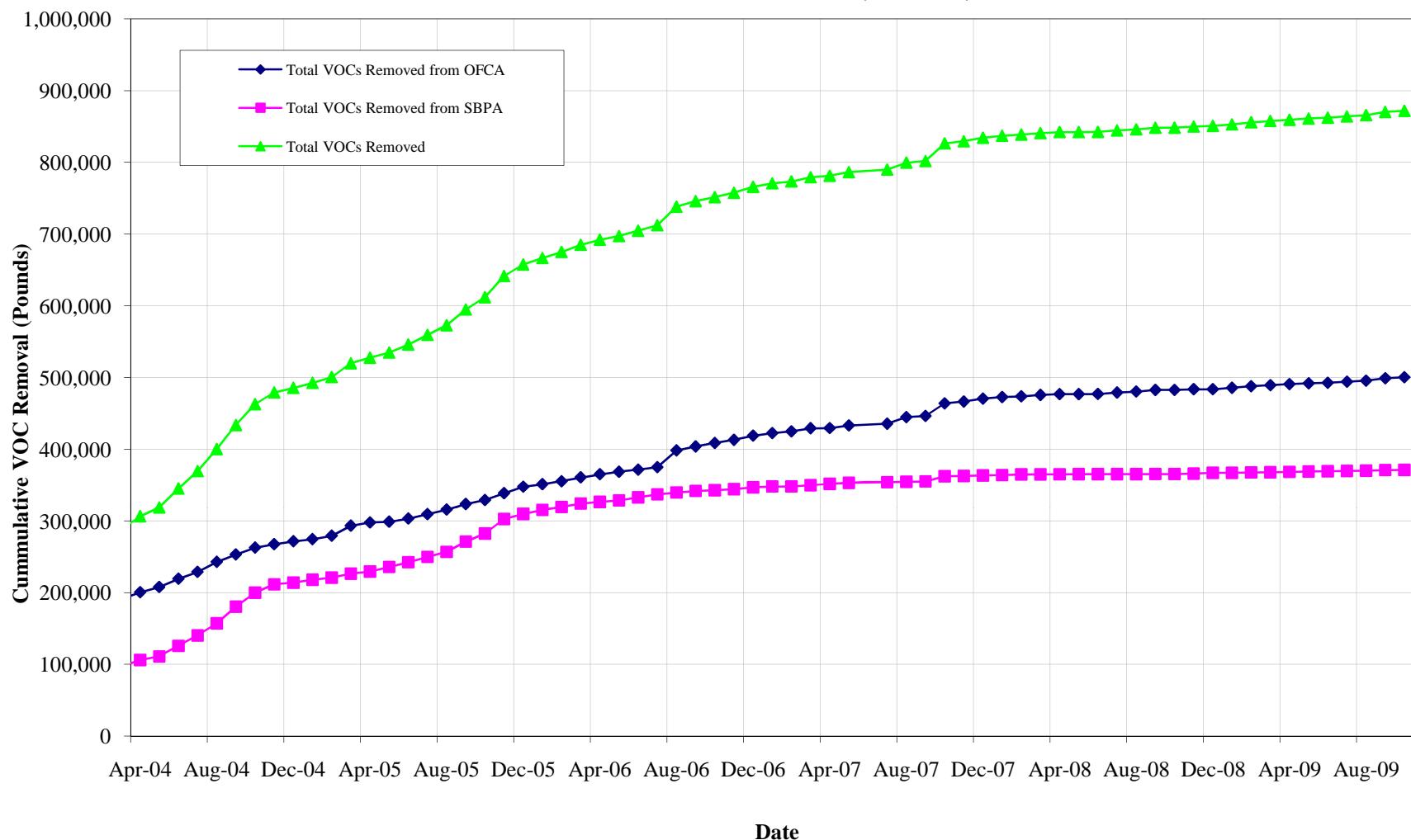
NM = Not measured

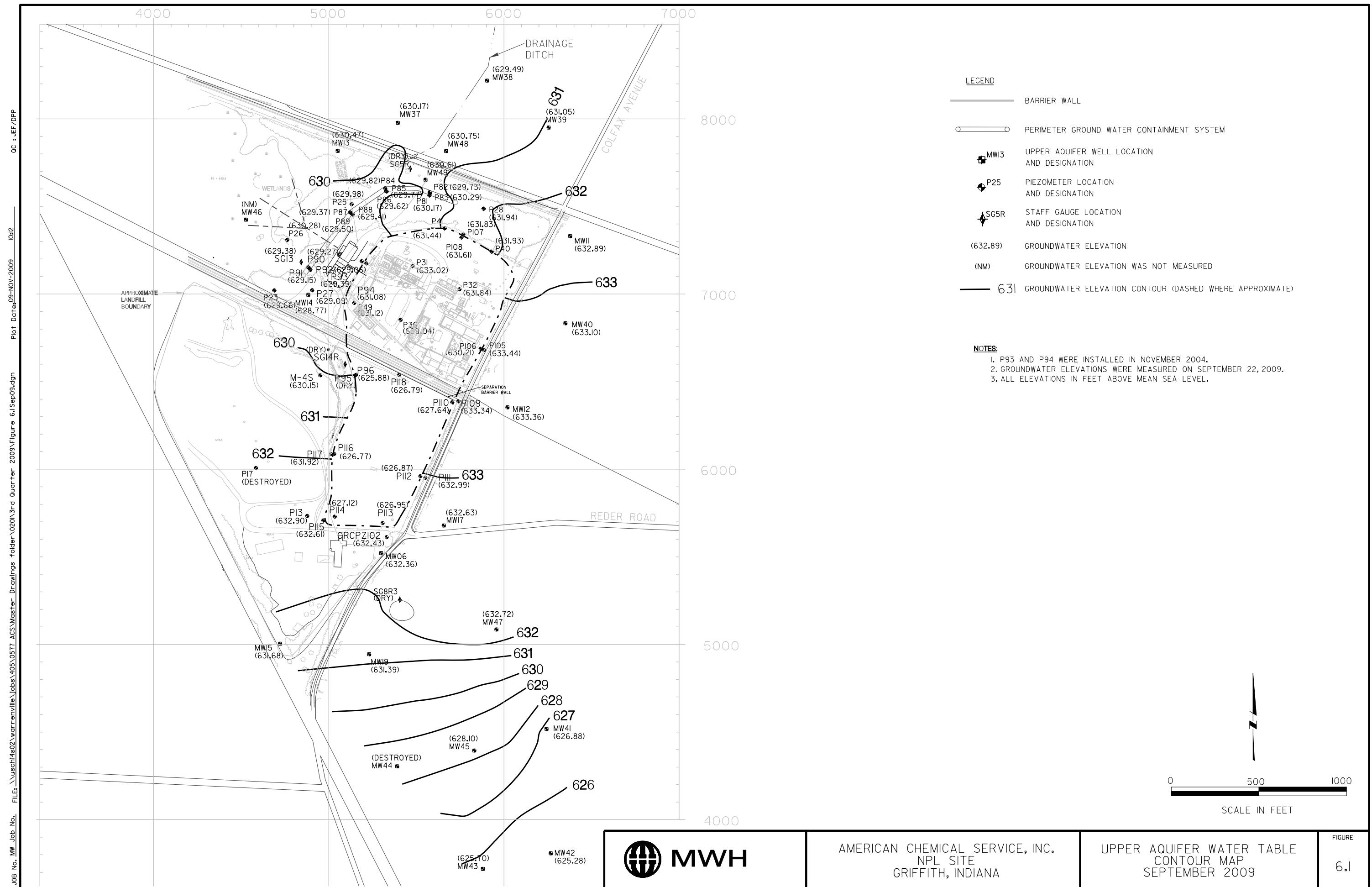
## **FIGURES**

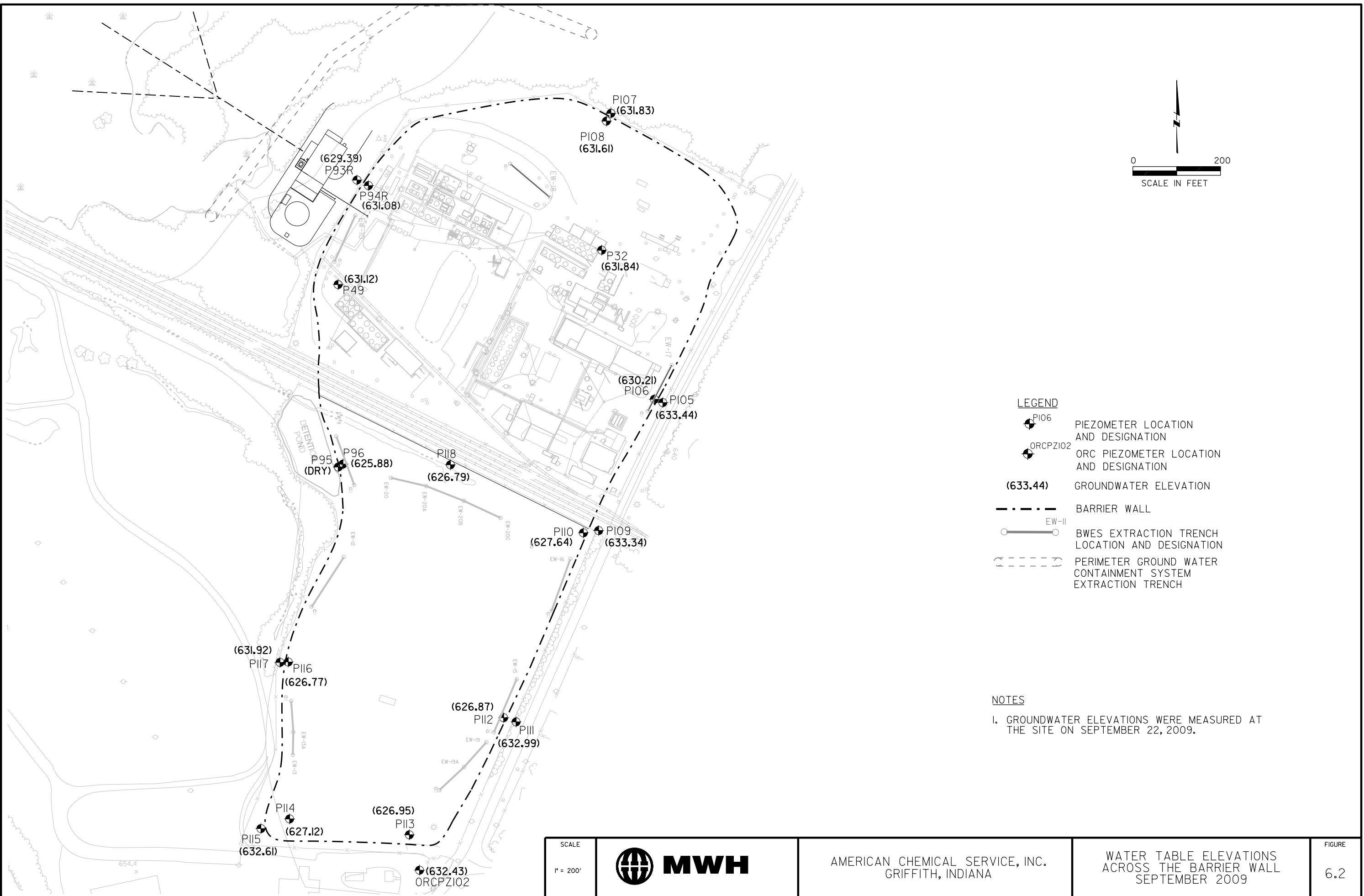
**Figure 3.1**  
**VOC Removal Rate**  
**American Chemical Services NPL Site, Griffith, IN**

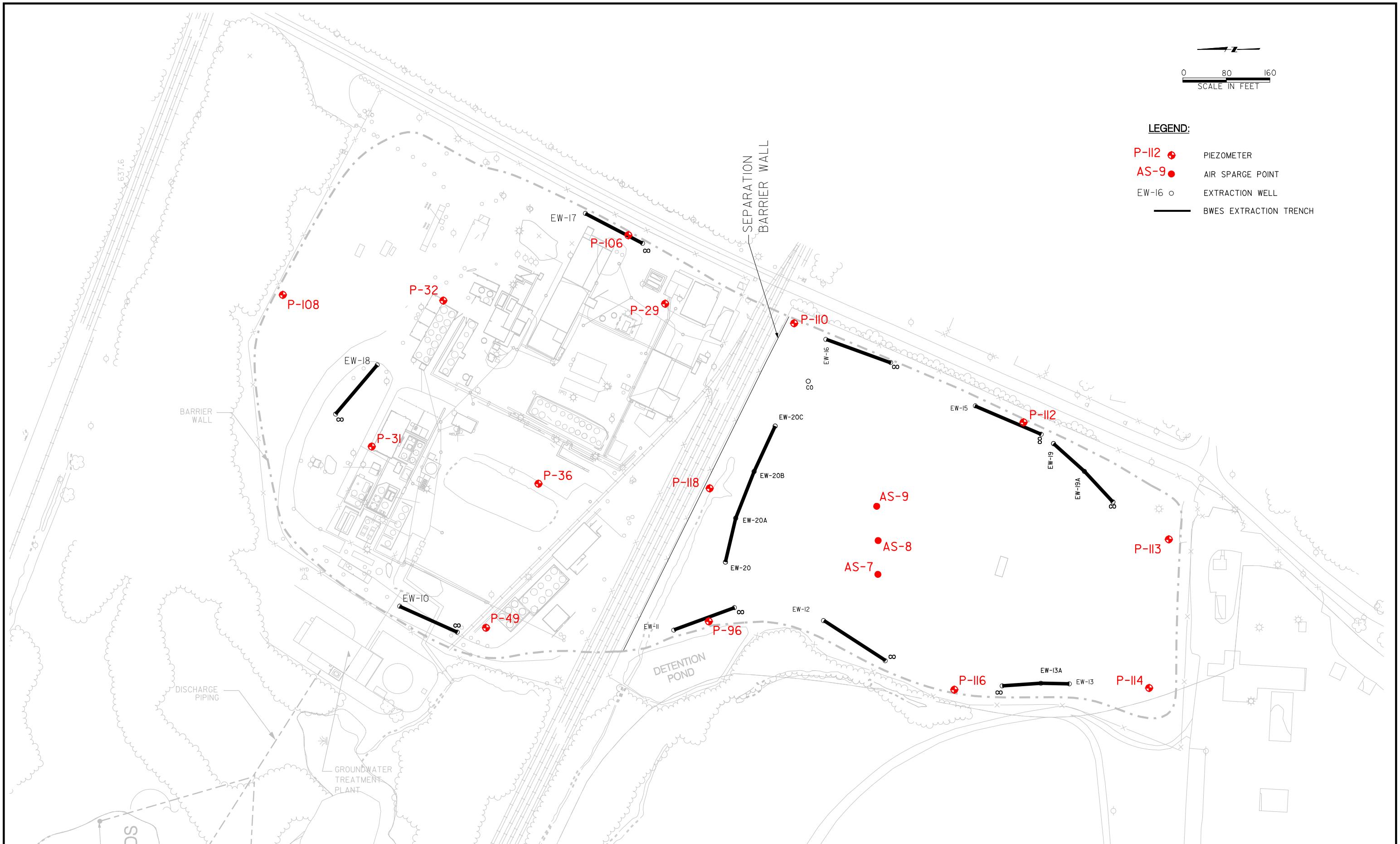


**Figure 3.2**  
**Total VOCs Removed**  
**American Chemical Services NPL Site, Griffith, IN**









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ROBERT A.  
(PROJECT M)  
(COMPANY)

BY \_\_\_\_\_  
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MANAGER) \_\_\_\_\_ LICENSE NO. D  
OFFICER) \_\_\_\_\_ LICENSE NO. D



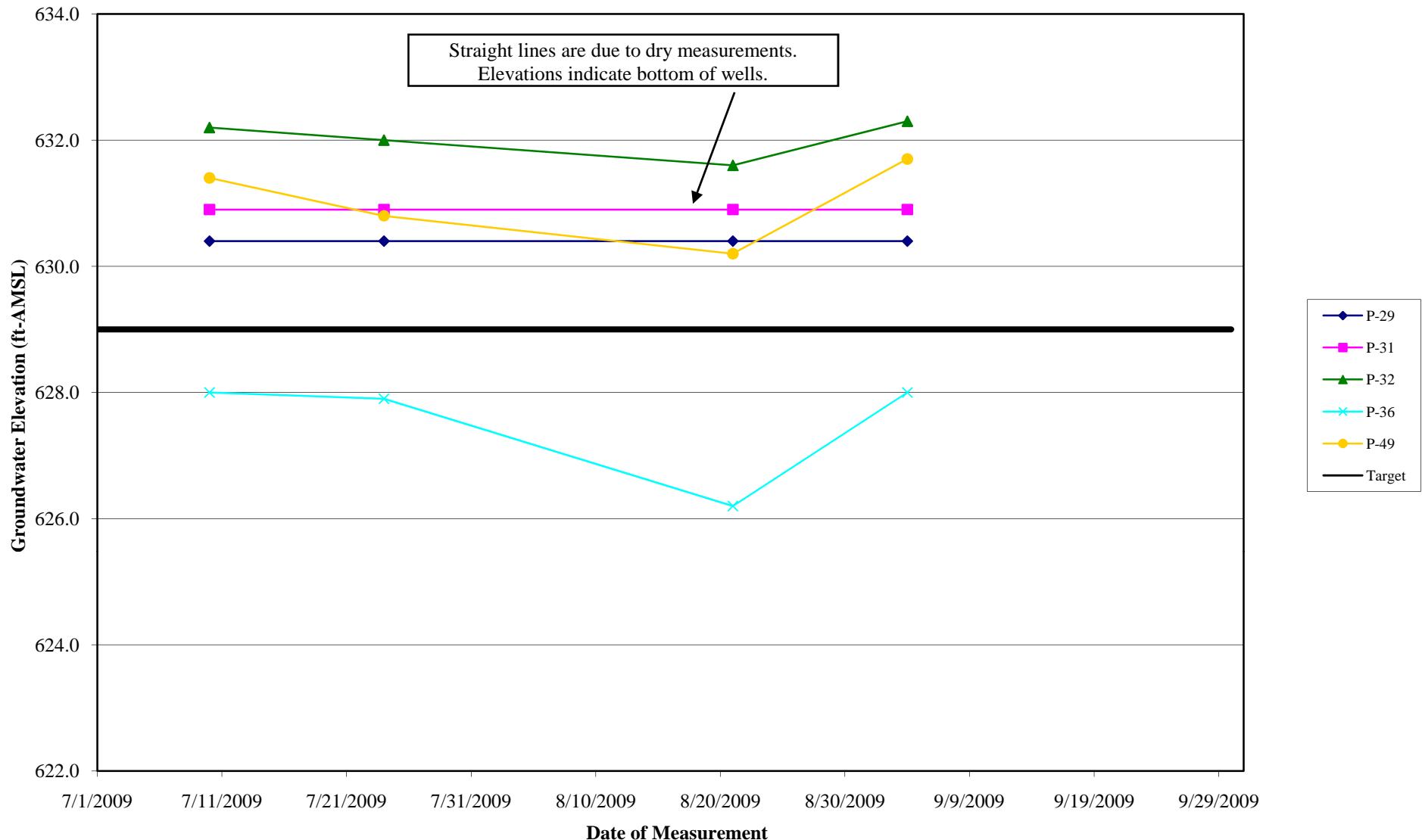
**MWH**  
MONTGOMERY WATSON HARZ

AMERICAN CHEMICAL SERVICE SUPERFUND SITE  
GRIFFITH, INDIANA

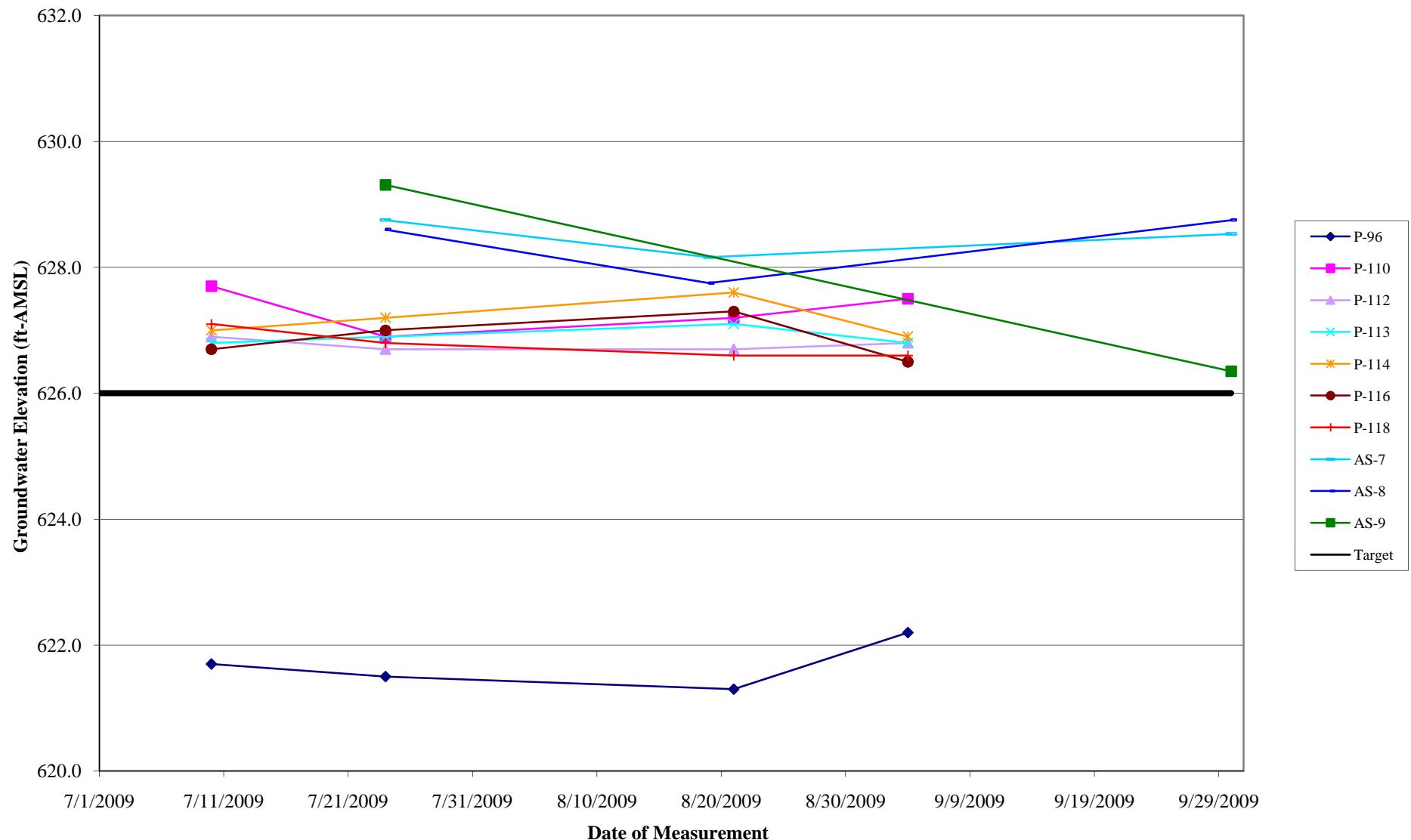
#### GROUNDWATER LEVEL MEASURING LOCATIONS

FIGURE  
6.3

**Figure 6.4**  
**Water Level Trends Inside the Barrier Wall (Still Bottoms Pond Area)**  
**ACS NPL Site**  
**Griffith, Indiana**



**Figure 6.5**  
**Water Level Trends Inside the Barrier Wall (Off-Site Area)**  
**ACS NPL Site**  
**Griffith, Indiana**



**APPENDIX A**

**EFFLUENT ANALYTICAL DATA**

**July 13, 2009 Compliance Sample  
Laboratory Results**


  
**Microbac**
**ANALYTICAL RESULTS**

 Date: *Tuesday, July 21, 2009*

<b>Client:</b>	MWH, Inc.	<b>Work Order / ID:</b>	ME0907551-01
<b>Client Project:</b>	July 2009 - Quarterly GWTP / ACS	<b>Collection Date:</b>	07/13/09 14:00
<b>Client Sample ID:</b>	Effluent - July 2009	<b>Date Received:</b>	07/13/09 15:00
<b>Sample Description:</b>			
<b>Sample Matrix:</b>	Aqueous		

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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PCB'S	Method: SW8082			Prep Date/Time: 07/16/09 06:27 Analyst: MLT				
Aroclor 1016	A	ND	0.00011	0.00051		mg/L	1	07/16/09 21:51
Aroclor 1221	A	ND	0.00051	0.00051		mg/L	1	07/16/09 21:51
Aroclor 1232	A	ND	0.00051	0.00051		mg/L	1	07/16/09 21:51
Aroclor 1242	A	ND	0.000099	0.00051		mg/L	1	07/16/09 21:51
Aroclor 1248	A	ND	0.00014	0.00051		mg/L	1	07/16/09 21:51
Aroclor 1254	A	ND	0.00017	0.00051		mg/L	1	07/16/09 21:51
Aroclor 1260	A	ND	0.00011	0.00051		mg/L	1	07/16/09 21:51
<i>Surr: Tetrachloro-m-xylene</i>	S	80.0		45.2-114	%REC	1	07/16/09 21:51	
<i>Surr: Decachlorobiphenyl</i>	S	60.0		11.6-136	%REC	1	07/16/09 21:51	

TOTAL METALS	Method: SW6010B			Prep Date/Time: 07/14/09 15:45 Analyst: GJM				
Arsenic	A	ND	0.0025	0.010		mg/L	1	07/15/09 18:04
Beryllium	A	ND	0.00000000014	0.0010		mg/L	1	07/15/09 18:04
Cadmium	A	ND	0.00030	0.0020		mg/L	1	07/15/09 18:04
Manganese	A	0.030	0.00030	0.0020		mg/L	1	07/15/09 18:04
Selenium	A	ND	0.0053	0.030		mg/L	1	07/15/09 18:04
Thallium	A	ND	0.0043	0.050		mg/L	1	07/15/09 18:04
Zinc	A	ND	0.0073	0.020		mg/L	1	07/15/09 18:04

TOTAL METALS	Method: SW7470A			Prep Date/Time: 07/15/09 15:35 Analyst: GJM				
Mercury	A	ND	0.000030	0.00020		mg/L	1	07/16/09 10:07

SEMOVOLATILE ORGANICS	Method: SW8270C			Prep Date/Time: 07/15/09 11:51 Analyst: BEM				
Bis(2-ethylhexyl)phthalate	A	ND	0.00057	0.0052		mg/L	1	07/16/09 23:12
Bis(2-chloroethyl)ether	A	ND	0.00047	0.0052		mg/L	1	07/16/09 23:12
2,2'-oxybis(1-chloropropane)	A	ND	0.00047	0.0052		mg/L	1	07/16/09 23:12
Isophorone	A	ND	0.00052	0.0052		mg/L	1	07/16/09 23:12
3/4-Methylphenol	A	ND	0.00042	0.0052		mg/L	1	07/16/09 23:12
Pentachlorophenol	A	ND	0.00068	0.026		mg/L	1	07/16/09 23:12
<i>Surr: Nitrobenzene-d5</i>	S	50.0		10-121	%REC	1	07/16/09 23:12	
<i>Surr: 2-Fluorobiphenyl</i>	S	39.4		10-109	%REC	1	07/16/09 23:12	
<i>Surr: Terphenyl-d14</i>	S	36.3		10-130	%REC	1	07/16/09 23:12	
<i>Surr: Phenol-d5</i>	S	22.7		10-100	%REC	1	07/16/09 23:12	
<i>Surr: 2-Fluorophenol</i>	S	21.2		10-84.7	%REC	1	07/16/09 23:12	
<i>Surr: 2,4,6-Tribromophenol</i>	S	52.7		10-120	%REC	1	07/16/09 23:12	

VOC'S	Method: SW8260B			Prep Date/Time:				Analyst: CLR
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250 West 84th Drive, Merrillville, IN 46410 TEL.800.536.8379 TEL.219.769.8378 FAX.219.769.1664

**ANALYTICAL RESULTS**Date: Tuesday, July 21, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Quarterly GWTP / ACS  
**Client Sample ID:** Effluent - July 2009  
**Sample Description:**  
**Sample Matrix:** Aqueous

**Work Order / ID:** ME0907551-01  
**Collection Date:** 07/13/09 14:00  
**Date Received:** 07/13/09 15:00

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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VOC'S	Method: SW8260B			Prep Date/Time:		Analyst: CLR		
Acetone	A	ND	0.0020	0.0050		mg/L	1	07/20/09 23:10
Benzene	A	ND	0.00030	0.0010		mg/L	1	07/20/09 23:10
2-Butanone	A	ND	0.0015	0.0020		mg/L	1	07/20/09 23:10
Chloromethane	A	ND	0.00030	0.0020		mg/L	1	07/20/09 23:10
1,1-Dichloroethane	A	0.0031	0.00030	0.0010		mg/L	1	07/20/09 23:10
cis-1,2-Dichloroethene	A	0.028	0.00040	0.0010		mg/L	1	07/20/09 23:10
Ethylbenzene	A	ND	0.00020	0.0010		mg/L	1	07/20/09 23:10
4-Methyl-2-Pentanone	A	ND	0.00080	0.0010		mg/L	1	07/20/09 23:10
Methylene chloride	A	0.00077	0.00070	0.0020	J	mg/L	1	07/20/09 23:10
Tetrachloroethene	A	ND	0.00040	0.0010		mg/L	1	07/20/09 23:10
Trichloroethene	A	0.00042	0.00030	0.0010	J	mg/L	1	07/20/09 23:10
Vinyl chloride	A	0.00047	0.00040	0.0020	J	mg/L	1	07/20/09 23:10
1,4-Dichlorobenzene	A	ND	0.00020	0.0010		mg/L	1	07/20/09 23:10
Surr: 4-Bromofluorobenzene	S	98.4	0	75.2-115		%REC	1	07/20/09 23:10
Surr: Dibromofluoromethane	S	101	0	92.7-119		%REC	1	07/20/09 23:10
Surr: 1,2-Dichloroethane-d4	S	97.5	0	88.2-132		%REC	1	07/20/09 23:10
Surr: Toluene-d8	S	100	0	89.3-116		%REC	1	07/20/09 23:10

<b>BOD, 5 DAY</b>	Method: 5210B_18ED			Prep Date/Time: 07/13/09 19:54			Analyst: GBZ	
Biochemical Oxygen Demand	A	ND	2.0	2.0		mg/L	1	07/13/09 21:17
<b>PH</b>	Method: 4500H B/9040C			Prep Date/Time:			Analyst: GJM	
pH	A	7.38	0.02	0.02	H	pH units	1	07/15/09 00:00
<b>TOTAL SUSPENDED SOLIDS</b>	Method: 2540D_18ED			Prep Date/Time:			Analyst: JLW	
Total Suspended Solids	A	ND	1.0	1.0		mg/L	1	07/14/09 15:49

**August 13, 2009 Compliance Sample  
Laboratory Results**

## ANALYTICAL RESULTS

Date:

Friday, August 21, 2009

**Client:** MWH, Inc.  
**Client Project:** GWTP - Monthly / ACS  
**Client Sample ID:** Effluent  
**Sample Description:**  
**Sample Matrix:** Aqueous

**Work Order / ID:** ME0908625-01  
**Collection Date:** 08/13/09 12:35  
**Date Received:** 08/13/09 13:30

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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VOC'S		Method:	SW8260B			Prep Date/Time:	Analyst: JLN	
Acetone	A	ND	0.0020	0.0050		mg/L	1	08/19/09 14:24
Benzene	A	ND	0.00030	0.0010		mg/L	1	08/19/09 14:24
2-Butanone	A	ND	0.0015	0.0020		mg/L	1	08/19/09 14:24
Chloromethane	A	ND	0.00030	0.0020		mg/L	1	08/19/09 14:24
1,1-Dichloroethane	A	0.0049	0.00030	0.0010		mg/L	1	08/19/09 14:24
cis-1,2-Dichloroethene	A	0.027	0.00040	0.0010		mg/L	1	08/19/09 14:24
Ethylbenzene	A	ND	0.00020	0.0010		mg/L	1	08/19/09 14:24
4-Methyl-2-Pentanone	A	ND	0.00080	0.0010		mg/L	1	08/19/09 14:24
Methylene chloride	A	ND	0.00070	0.0020		mg/L	1	08/19/09 14:24
Tetrachloroethene	A	ND	0.00040	0.0010		mg/L	1	08/19/09 14:24
Trichloroethene	A	0.00055	0.00030	0.0010	J	mg/L	1	08/19/09 14:24
Vinyl chloride	A	0.00063	0.00040	0.0020	J	mg/L	1	08/19/09 14:24
1,4-Dichlorobenzene	A	ND	0.00020	0.0010		mg/L	1	08/19/09 14:24
Surr: 4-Bromofluorobenzene	S	93.9	0	75.2-115		%REC	1	08/19/09 14:24
Surr: Dibromofluoromethane	S	103	0	92.7-119		%REC	1	08/19/09 14:24
Surr: 1,2-Dichloroethane-d4	S	107	0	88.2-132		%REC	1	08/19/09 14:24
Surr: Toluene-d8	S	99.9	0	89.3-116		%REC	1	08/19/09 14:24

PH		Method:	4500H B/9040C			Prep Date/Time:	Analyst: GJM	
pH	A	7.73	0.02	0.02	H	pH units	1	08/14/09 00:00

10/13/09

**ANALYTICAL RESULTS**

Date: Friday, August 21, 2009

**Client:** MWH, Inc.  
**Client Project:** GWTP - Monthly / ACS  
**Client Sample ID:** Effluent  
**Sample Description:**  
**Sample Matrix:** Aqueous

**Work Order / ID:** ME0908625-01  
**Collection Date:** 08/13/09 12:35  
**Date Received:** 08/13/09 13:30

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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VOC'S	Method: SW8260B			Prep Date/Time:			Analyst: JLN	
Acetone	A	ND	0.0020	0.0050		mg/L	1	08/19/09 14:24
Benzene	A	ND	0.00030	0.0010		mg/L	1	08/19/09 14:24
2-Butanone	A	ND	0.0015	0.0020		mg/L	1	08/19/09 14:24
Chloromethane	A	ND	0.00030	0.0020		mg/L	1	08/19/09 14:24
1,1-Dichloroethane	A	0.0049	0.00030	0.0010		mg/L	1	08/19/09 14:24
cis-1,2-Dichloroethene	A	0.027	0.00040	0.0010		mg/L	1	08/19/09 14:24
Ethylbenzene	A	ND	0.00020	0.0010		mg/L	1	08/19/09 14:24
4-Methyl-2-Pentanone	A	ND	0.00080	0.0010		mg/L	1	08/19/09 14:24
Methylene chloride	A	ND	0.00070	0.0020		mg/L	1	08/19/09 14:24
Tetrachloroethene	A	ND	0.00040	0.0010		mg/L	1	08/19/09 14:24
Trichloroethene	A	0.00055	0.00030	0.0010	J	mg/L	1	08/19/09 14:24
Vinyl chloride	A	0.00063	0.00040	0.0020	J	mg/L	1	08/19/09 14:24
1,4-Dichlorobenzene	A	ND	0.00020	0.0010		mg/L	1	08/19/09 14:24
Surr: 4-Bromofluorobenzene	S	93.9		0	75.2-115	%REC	1	08/19/09 14:24
Surr: Dibromofluoromethane	S	103		0	92.7-119	%REC	1	08/19/09 14:24
Surr: 1,2-Dichloroethane-d4	S	107		0	88.2-132	%REC	1	08/19/09 14:24
Sur: Toluene-d8	S	99.9		0	89.3-116	%REC	1	08/19/09 14:24

PH	Method: 4500H B/9040C			Prep Date/Time:			Analyst: GJM	
pH	A	7.13	0.02	0.02	H	pH units	1	08/14/09 00:00

10/13/09

**September 10, 2009 Compliance Sample  
Laboratory Results**

**ANALYTICAL RESULTS**

Date: Thursday, September 17, 2009

**Client:** MWH, Inc.  
**Client Project:** GWTP - Monthly / ACS  
**Client Sample ID:** Effluent  
**Sample Description:**  
**Sample Matrix:** Aqueous

**Work Order / ID:** ME0909486-01  
**Collection Date:** 09/10/09 13:00  
**Date Received:** 09/10/09 15:35

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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VOC'S	Method: SW8260B		Prep Date/Time:			Analyst: CLR		
Acetone	A	0.003	0.0020	0.0050	J	mg/L	1	09/11/09 18:55
Benzene	A	ND	0.00030	0.0010		mg/L	1	09/11/09 18:55
2-Butanone	A	ND	0.0015	0.0020		mg/L	1	09/11/09 18:55
Chloromethane	A	ND	0.00030	0.0020		mg/L	1	09/11/09 18:55
1,1-Dichloroethane	A	ND	0.00030	0.0010		mg/L	1	09/11/09 18:55
cis-1,2-Dichloroethene	A	ND	0.00040	0.0010		mg/L	1	09/11/09 18:55
Ethylbenzene	A	ND	0.00020	0.0010		mg/L	1	09/11/09 18:55
4-Methyl-2-Pentanone	A	ND	0.00080	0.0010		mg/L	1	09/11/09 18:55
Methylene chloride	A	ND	0.00070	0.0020		mg/L	1	09/11/09 18:55
Tetrachloroethene	A	ND	0.00040	0.0010		mg/L	1	09/11/09 18:55
Trichloroethene	A	ND	0.00030	0.0010		mg/L	1	09/11/09 18:55
Vinyl chloride	A	ND	0.00040	0.0020		mg/L	1	09/11/09 18:55
1,4-Dichlorobenzene	A	ND	0.00020	0.0010		mg/L	1	09/11/09 18:55
Surr: 4-Bromofluorobenzene	S	98.0	0	75.2-115		%REC	1	09/11/09 18:55
Surr: Dibromofluoromethane	S	101	0	92.7-119		%REC	1	09/11/09 18:55
Surr: 1,2-Dichloroethane-d4	S	100	0	88.2-132		%REC	1	09/11/09 18:55
Surr: Toluene-d8	S	98.1	0	89.3-116		%REC	1	09/11/09 18:55

PH	Method: 4500H B/9040C		Prep Date/Time:			Analyst: WAD		
pH	A	8.13	0.02	0.02	H	pH units	1	09/11/09 13:54

**ANALYTICAL RESULTS**

Date: Thursday, September 17, 2009

**Client:** MWH, Inc.  
**Client Project:** GWTP - Monthly / ACS  
**Client Sample ID:** Effluent  
**Sample Description:**  
**Sample Matrix:** Aqueous

**Work Order / ID:** ME0909486-01  
**Collection Date:** 09/10/09 13:00  
**Date Received:** 09/10/09 15:35

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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VOC'S	Method: SW8260B			Prep Date/Time:			Analyst: CLR	
Acetone	A	0.003	0.0020	0.0050	J	mg/L	1	09/11/09 18:55
Benzene	A	ND	0.00030	0.0010		mg/L	1	09/11/09 18:55
2-Butanone	A	ND	0.0015	0.0020		mg/L	1	09/11/09 18:55
Chloromethane	A	ND	0.00030	0.0020		mg/L	1	09/11/09 18:55
1,1-Dichloroethane	A	ND	0.00030	0.0010		mg/L	1	09/11/09 18:55
cis-1,2-Dichloroethene	A	ND	0.00040	0.0010		mg/L	1	09/11/09 18:55
Ethylbenzene	A	ND	0.00020	0.0010		mg/L	1	09/11/09 18:55
4-Methyl-2-Pentanone	A	ND	0.00080	0.0010		mg/L	1	09/11/09 18:55
Methylene chloride	A	ND	0.00070	0.0020		mg/L	1	09/11/09 18:55
Tetrachloroethene	A	ND	0.00040	0.0010		mg/L	1	09/11/09 18:55
Trichloroethene	A	ND	0.00030	0.0010		mg/L	1	09/11/09 18:55
Vinyl chloride	A	ND	0.00040	0.0020		mg/L	1	09/11/09 18:55
1,4-Dichlorobenzene	A	ND	0.00020	0.0010		mg/L	1	09/11/09 18:55
Surr: 4-Bromofluorobenzene	S	98.0	0	75.2-115		%REC	1	09/11/09 18:55
Surr: Dibromofluoromethane	S	101	0	92.7-119		%REC	1	09/11/09 18:55
Surr: 1,2-Dichloroethane-d4	S	100	0	88.2-132		%REC	1	09/11/09 18:55
Surr: Toluene-d8	S	98.1	0	89.3-116		%REC	1	09/11/09 18:55

PH	Method: 4500H B/9040C			Prep Date/Time:			Analyst: WAD	
pH	A	8.13	0.02	0.02	H	pH units	1	09/11/09 13:54

9/10/2009

**APPENDIX B**

**THERMAL OXIDIZER OFF-GAS ANALYTICAL DATA**

**July 9, 2009 Off-Gas Sample Laboratory Results**

## ANALYTICAL RESULTS

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #1 Offsite ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-01A  
**Collection Date:** 07/09/09 11:05  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS		Method:	TO-15		Prep Date/Time:		Analyst:	MAK
1,1,1-Trichloroethane	A	8700	320	1100	ppbv	,00	07/28/09 17:06	UJ
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	07/29/09 02:41	J
1,1,2-Trichloroethane	A	86	10	30	ppbv	60	07/29/09 02:41	
1,1-Dichloroethane	A	1800	42	150	ppbv	300	07/28/09 21:52	
1,1-Dichloroethene	A	91	10	30	ppbv	60	07/29/09 02:41	
1,2-Dichloroethane	A	470	10	30	ppbv	60	07/29/09 02:41	
1,2-Dichloropropane	A	130	8.4	30	ppbv	60	07/29/09 02:41	
2-Butanone	A	920	7.2	120	ppbv	60	07/29/09 02:41	
2-Hexanone	A	ND	20	120	ppbv	60	07/29/09 02:41	UJ
4-Methyl-2-Pentanone	A	670	14	30	ppbv	60	07/29/09 02:41	J
Acetone	A	1500	170	590	ppbv	300	07/28/09 21:52	B
Benzene	A	5100	36	150	ppbv	300	07/28/09 21:52	
Bromodichloromethane	A	ND	9	30	ppbv	60	07/29/09 02:41	
Bromoform	A	ND	10	30	ppbv	60	07/29/09 02:41	
Bromomethane	A	ND	11	30	ppbv	60	07/29/09 02:41	
Carbon disulfide	A	ND	11	30	ppbv	60	07/29/09 02:41	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	07/29/09 02:41	
Chlorobenzene	A	ND	9.6	30	ppbv	60	07/29/09 02:41	
Chloroethane	A	49	10	30	ppbv	60	07/29/09 02:41	UJ
Chloroform	A	1200	36	150	ppbv	300	07/28/09 21:52	
Chloromethane	A	19	14	120	J	ppbv	60	07/29/09 02:41
cis-1,2-Dichloroethene	A	910	42	150	ppbv	300	07/28/09 21:52	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	07/29/09 02:41	
Dibromochloromethane	A	ND	10	30	ppbv	60	07/29/09 02:41	UJ
Ethyl benzene	A	3200	53	150	ppbv	300	07/28/09 21:52	J
m,p-Xylene	A	6900	640	2100	ppbv	,00	07/28/09 17:06	J
Methylene chloride	A	9400	300	4300	ppbv	,00	07/28/09 17:06	
o-Xylene	A	4700	50	150	ppbv	300	07/28/09 21:52	J
Styrene	A	87	11	30	ppbv	60	07/29/09 02:41	J
Tetrachloroethene	A	5500	360	1100	ppbv	,00	07/28/09 17:06	J
Toluene	A	20000	380	1100	ppbv	,00	07/28/09 17:06	J
trans-1,2-Dichloroethene	A	23	19	30	J	ppbv	60	07/29/09 02:41
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	07/29/09 02:41	
Trichloroethene	A	6100	340	1100	ppbv	,00	07/28/09 17:06	
Vinyl chloride	A	110	9	30	ppbv	60	07/29/09 02:41	
Surr: 4-Bromofluorobenzene	S	95.5	0	77.7-127	%REC	60	07/29/09 02:41	UJ

## ANALYTICAL RESULTS

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #2 SBPA ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-02A  
**Collection Date:** 07/09/09 11:30  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method: TO-15		Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	4100	350	1200		ppbv	,00	07/28/09 17:50
1,1,2,2-Tetrachloroethane	A	ND	13	30		ppbv	60	07/29/09 03:22
1,1,2-Trichloroethane	A	12	10	30	J	ppbv	60	07/29/09 03:22
1,1-Dichloroethane	A	1100	8.4	30		ppbv	60	07/29/09 03:22
1,1-Dichloroethene	A	50	10	30		ppbv	60	07/29/09 03:22
1,2-Dichloroethane	A	88	10	30		ppbv	60	07/29/09 03:22
1,2-Dichloropropane	A	77	8.4	30		ppbv	60	07/29/09 03:22
2-Butanone	A	210	7.2	120		ppbv	60	07/29/09 03:22
2-Hexanone	A	ND	20	120		ppbv	60	07/29/09 03:22
4-Methyl-2-Pentanone	A	190	14	30		ppbv	60	07/29/09 03:22
Acetone	A	760	34	120		ppbv	60	07/29/09 03:22
Benzene	A	880	7.2	30		ppbv	60	07/29/09 03:22
Bromodichloromethane	A	ND	9	30		ppbv	60	07/29/09 03:22
Bromoform	A	ND	10	30		ppbv	60	07/29/09 03:22
Bromomethane	A	ND	11	30		ppbv	60	07/29/09 03:22
Carbon disulfide	A	ND	11	30		ppbv	60	07/29/09 03:22
Carbon tetrachloride	A	ND	9.6	30		ppbv	60	07/29/09 03:22
Chlorobenzene	A	ND	9.6	30		ppbv	60	07/29/09 03:22
Chloroethane	A	17	10	30	J	ppbv	60	07/29/09 03:22
Chloroform	A	1100	36	150		ppbv	300	07/28/09 22:32
Chloromethane	A	ND	14	120		ppbv	60	07/29/09 03:22
cis-1,2-Dichloroethene	A	2400	42	150		ppbv	300	07/28/09 22:32
cis-1,3-Dichloropropene	A	ND	8.4	30		ppbv	60	07/29/09 03:22
Dibromochloromethane	A	ND	10	30		ppbv	60	07/29/09 03:22
Ethyl benzene	A	1200	11	30		ppbv	60	07/29/09 03:22
m,p-Xylene	A	5000	89	300		ppbv	300	07/28/09 22:32
Methylene chloride	A	970	42	590		ppbv	300	07/28/09 22:32
o-Xylene	A	1900	50	150		ppbv	300	07/28/09 22:32
Styrene	A	ND	11	30		ppbv	60	07/29/09 03:22
Tetrachloroethene	A	5700	50	150		ppbv	300	07/28/09 22:32
Toluene	A	5100	53	150		ppbv	300	07/28/09 22:32
trans-1,2-Dichloroethene	A	27	19	30	J	ppbv	60	07/29/09 03:22
trans-1,3-Dichloropropene	A	ND	7.2	30		ppbv	60	07/29/09 03:22
Trichloroethene	A	4900	48	150		ppbv	300	07/28/09 22:32
Vinyl chloride	A	150	9	30		ppbv	60	07/29/09 03:22
Surr: 4-Bromofluorobenzene	S	81.7	0	77.7-127		%REC	60	07/29/09 03:22

10/9/09

## ANALYTICAL RESULTS

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #3 TOX 1 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-03A  
**Collection Date:** 07/09/09 11:35  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS		Method: TO-15	Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	3800	350	1200	ppbv	3,00	07/28/09 18:30	UJ
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	07/29/09 04:04	
1,1,2-Trichloroethane	A	ND	10	30	ppbv	60	07/29/09 04:04	
1,1-Dichloroethane	A	1000	8.4	30	ppbv	60	07/29/09 04:04	
1,1-Dichloroethene	A	39	10	30	ppbv	60	07/29/09 04:04	
1,2-Dichloroethane	A	69	10	30	ppbv	60	07/29/09 04:04	
1,2-Dichloropropane	A	58	8.4	30	ppbv	60	07/29/09 04:04	
2-Butanone	A	140	7.2	120	ppbv	60	07/29/09 04:04	
2-Hexanone	A	ND	20	120	ppbv	60	07/29/09 04:04	UJ
4-Methyl-2-Pentanone	A	110	14	30	ppbv	60	07/29/09 04:04	J
Acetone	A	680	34	120	ppbv	60	07/29/09 04:04	B
Benzene	A	870	7.2	30	ppbv	60	07/29/09 04:04	
Bromodichloromethane	A	ND	9	30	ppbv	60	07/29/09 04:04	
Bromoform	A	ND	10	30	ppbv	60	07/29/09 04:04	
Bromomethane	A	ND	11	30	ppbv	60	07/29/09 04:04	
Carbon disulfide	A	ND	11	30	ppbv	60	07/29/09 04:04	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	07/29/09 04:04	
Chlorobenzene	A	ND	9.6	30	ppbv	60	07/29/09 04:04	UJ
Chloroethane	A	19	10	30	J	ppbv	60	07/29/09 04:04
Chloroform	A	860	35	150	ppbv	300	07/28/09 23:13	
Chloromethane	A	16	14	120	J	ppbv	60	07/29/09 04:04
cis-1,2-Dichloroethene	A	2300	41	150	ppbv	300	07/28/09 23:13	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	07/29/09 04:04	
Dibromochloromethane	A	ND	10	30	ppbv	60	07/29/09 04:04	UJ
Ethyl benzene	A	900	53	150	ppbv	300	07/28/09 23:13	J
m,p-Xylene	A	3700	88	290	ppbv	300	07/28/09 23:13	J
Methylene chloride	A	970	41	590	ppbv	300	07/28/09 23:13	J
o-Xylene	A	1400	50	150	ppbv	300	07/28/09 23:13	J
Styrene	A	12	11	30	J	ppbv	60	07/29/09 04:04
Tetrachloroethene	A	5300	50	150	ppbv	300	07/28/09 23:13	
Toluene	A	4800	53	150	ppbv	300	07/28/09 23:13	
trans-1,2-Dichloroethene	A	20	19	30	J	ppbv	60	07/29/09 04:04
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	07/29/09 04:04	
Trichloroethene	A	4700	47	150	ppbv	300	07/28/09 23:13	
Vinyl chloride	A	170	9	30	ppbv	60	07/29/09 04:04	
Surr: 4-Bromofluorobenzene	S	89.3	0	77.7-127	%REC	60	07/29/09 04:04	UJ

## ANALYTICAL RESULTS

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #4 TOX 1 INFLUENT(DUP)  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-04A  
**Collection Date:** 07/09/09 11:50  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method:	TO-15			Prep Date/Time:		Analyst:	MAK
1,1,1-Trichloroethane	A	4000	320	1100	ppbv	,00	07/28/09 19:10	J US
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	07/29/09 04:46	
1,1,2-Trichloroethane	A	ND	10	30	ppbv	60	07/29/09 04:46	
1,1-Dichloroethane	A	1100	8.4	30	ppbv	60	07/29/09 04:46	
1,1-Dichloroethene	A	34	10	30	ppbv	60	07/29/09 04:46	
1,2-Dichloroethane	A	78	10	30	ppbv	60	07/29/09 04:46	
1,2-Dichloropropane	A	67	8.4	30	ppbv	60	07/29/09 04:46	
2-Butanone	A	140	7.2	120	ppbv	60	07/29/09 04:46	
2-Hexanone	A	28	20	120	J	ppbv	60	07/29/09 04:46
4-Methyl-2-Pentanone	A	110	14	30	ppbv	60	07/29/09 04:46	
Acetone	A	620	34	120	ppbv	60	07/29/09 04:46	
Benzene	A	1000	7.2	30	ppbv	60	07/29/09 04:46	
Bromodichloromethane	A	44	9	30	ppbv	60	07/29/09 04:46	
Bromoform	A	ND	10	30	ppbv	60	07/29/09 04:46	
Bromomethane	A	ND	11	30	ppbv	60	07/29/09 04:46	
Carbon disulfide	A	ND	11	30	ppbv	60	07/29/09 04:46	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	07/29/09 04:46	
Chlorobenzene	A	37	9.6	30	ppbv	60	07/29/09 04:46	
Chloroethane	A	36	10	30	ppbv	60	07/29/09 04:46	
Chloroform	A	1100	36	150	ppbv	300	07/28/09 23:55	
Chloromethane	A	22	14	120	J	ppbv	60	07/29/09 04:46
cis-1,2-Dichloroethene	A	2700	42	150	ppbv	300	07/28/09 23:55	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	07/29/09 04:46	
Dibromochloromethane	A	ND	10	30	ppbv	60	07/29/09 04:46	
Ethyl benzene	A	930	54	150	ppbv	300	07/28/09 23:55	
m,p-Xylene	A	4000	90	300	ppbv	300	07/28/09 23:55	
Methylene chloride	A	1600	42	600	ppbv	300	07/28/09 23:55	
o-Xylene	A	1500	51	150	ppbv	300	07/28/09 23:55	
Styrene	A	13	11	30	J	ppbv	60	07/29/09 04:46
Tetrachloroethene	A	2800	360	1100	ppbv	,00	07/28/09 19:10	
Toluene	A	5100	54	150	ppbv	300	07/28/09 23:55	
trans-1,2-Dichloroethene	A	ND	19	30	ppbv	60	07/29/09 04:46	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	07/29/09 04:46	
Trichloroethene	A	5400	48	150	ppbv	300	07/28/09 23:55	
Vinyl chloride	A	230	9	30	ppbv	60	07/29/09 04:46	
Sur: 4-Bromofluorobenzene	S	87.8	0	77.7-127	%REC	60	07/29/09 04:46	

**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #5 TOX 1 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-05A  
**Collection Date:** 07/09/09 11:45  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method: TO-15		Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	16	0.74	2.5		ppbv	5	07/28/09 15:02
1,1,2,2-Tetrachloroethane	A	ND	0.22	0.50		ppbv	1	07/28/09 15:44
1,1,2-Trichloroethane	A	ND	0.17	0.50		ppbv	1	07/28/09 15:44
1,1-Dichloroethane	A	4.1	0.14	0.50		ppbv	1	07/28/09 15:44
1,1-Dichloroethene	A	44	0.84	2.5		ppbv	5	07/28/09 15:02
1,2-Dichloroethane	A	0.60	0.17	0.50		ppbv	1	07/28/09 15:44
1,2-Dichloropropane	A	ND	0.14	0.50		ppbv	1	07/28/09 15:44
2-Butanone	A	9.1	0.12	2.0		ppbv	1	07/28/09 15:44
2-Hexanone	A	0.91	0.34	2.0	J	ppbv	1	07/28/09 15:44
4-Methyl-2-Pentanone	A	2.8	0.24	0.50		ppbv	1	07/28/09 15:44
Acetone	A	33	2.8	9.9		ppbv	5	07/28/09 15:02
Benzene	A	20	0.59	2.5		ppbv	5	07/28/09 15:02
Bromodichloromethane	A	ND	0.15	0.50		ppbv	1	07/28/09 15:44
Bromoform	A	ND	0.17	0.50		ppbv	1	07/28/09 15:44
Bromomethane	A	ND	0.19	0.50		ppbv	1	07/28/09 15:44
Carbon disulfide	A	ND	0.18	0.50		ppbv	1	07/28/09 15:44
Carbon tetrachloride	A	ND	0.16	0.50		ppbv	1	07/28/09 15:44
Chlorobenzene	A	0.45	0.16	0.50	J	ppbv	1	07/28/09 15:44
Chloroethane	A	ND	0.17	0.50		ppbv	1	07/28/09 15:44
Chloroform	A	8.5	0.12	0.50		ppbv	1	07/28/09 15:44
Chloromethane	A	1.9	0.23	2.0	J	ppbv	1	07/28/09 15:44
cis-1,2-Dichloroethene	A	17	0.14	0.50		ppbv	1	07/28/09 15:44
cis-1,3-Dichloropropene	A	ND	0.14	0.50		ppbv	1	07/28/09 15:44
Dibromochloromethane	A	ND	0.17	0.50		ppbv	1	07/28/09 15:44
Ethyl benzene	A	2.8	0.18	0.50		ppbv	1	07/28/09 15:44
m,p-Xylene	A	10	0.3	1.0		ppbv	1	07/28/09 15:44
Methylene chloride	A	17	0.14	2.0		ppbv	1	07/28/09 15:44
o-Xylene	A	3.5	0.17	0.50		ppbv	1	07/28/09 15:44
Styrene	A	4.6	0.19	0.50		ppbv	1	07/28/09 15:44
Tetrachloroethene	A	54	0.84	2.5		ppbv	5	07/28/09 15:02
Toluene	A	51	0.89	2.5		ppbv	5	07/28/09 15:02
trans-1,2-Dichloroethene	A	6.3	0.31	0.50		ppbv	1	07/28/09 15:44
trans-1,3-Dichloropropene	A	ND	0.12	0.50		ppbv	1	07/28/09 15:44
Trichloroethene	A	40	0.79	2.5		ppbv	5	07/28/09 15:02
Vinyl chloride	A	8.9	0.15	0.50		ppbv	1	07/28/09 15:44
Surr: 4-Bromofluorobenzene	S	103	0	77.7-127		%REC	5	07/28/09 15:02

## ANALYTICAL RESULTS

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #6 TOX 2 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-06A  
**Collection Date:** 07/09/09 12:10  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS		Method: TO-15	Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	5700	320	1100	ppbv	,00	07/28/09 19:51	KJ
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	07/29/09 01:17	UJ
1,1,2-Trichloroethane	A	46	10	30	ppbv	60	07/29/09 01:17	J
1,1-Dichloroethane	A	1400	42	150	ppbv	300	07/29/09 00:36	
1,1-Dichloroethene	A	55	10	30	ppbv	60	07/29/09 01:17	
1,2-Dichloroethane	A	370	10	30	ppbv	60	07/29/09 01:17	
1,2-Dichloropropane	A	120	8.4	30	ppbv	60	07/29/09 01:17	
2-Butanone	A	1100	7.2	120	ppbv	60	07/29/09 01:17	
2-Hexanone	A	ND	20	120	ppbv	60	07/29/09 01:17	KJ
4-Methyl-2-Pentanone	A	360	14	30	ppbv	60	07/29/09 01:17	J
Acetone	A	1700	170	590	ppbv	300	07/29/09 00:36	B
Benzene	A	5100	36	150	ppbv	300	07/29/09 00:36	
Bromodichloromethane	A	ND	9	30	ppbv	60	07/29/09 01:17	
Bromoform	A	ND	10	30	ppbv	60	07/29/09 01:17	
Bromomethane	A	ND	11	30	ppbv	60	07/29/09 01:17	
Carbon disulfide	A	ND	11	30	ppbv	60	07/29/09 01:17	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	07/29/09 01:17	
Chlorobenzene	A	ND	9.6	30	ppbv	60	07/29/09 01:17	
Chloroethane	A	230	10	30	ppbv	60	07/29/09 01:17	KJ
Chloroform	A	930	36	150	ppbv	300	07/29/09 00:36	
Chloromethane	A	23	14	120	J	ppbv	60	07/29/09 01:17
cis-1,2-Dichloroethene	A	1100	42	150	ppbv	300	07/29/09 00:36	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	07/29/09 01:17	
Dibromochloromethane	A	ND	10	30	ppbv	60	07/29/09 01:17	KJ
Ethyl benzene	A	1900	53	150	ppbv	300	07/29/09 00:36	J
m,p-Xylene	A	8500	640	2100	ppbv	,00	07/28/09 19:51	
Methylene chloride	A	6000	300	4300	ppbv	,00	07/28/09 19:51	
o-Xylene	A	3600	50	150	ppbv	300	07/29/09 00:36	J
Styrene	A	80	11	30	ppbv	60	07/29/09 01:17	
Tetrachloroethene	A	3300	360	1100	ppbv	,00	07/28/09 19:51	
Toluene	A	19000	380	1100	ppbv	,00	07/28/09 19:51	
trans-1,2-Dichloroethene	A	ND	19	30	ppbv	60	07/29/09 01:17	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	07/29/09 01:17	UJ
Trichloroethene	A	4000	340	1100	ppbv	,00	07/28/09 19:51	
Vinyl chloride	A	460	9	30	ppbv	60	07/29/09 01:17	
Surr: 4-Bromofluorobenzene	S	94.4	0	77.7-127	%REC	60	07/29/09 01:17	

10/10/109

## ANALYTICAL RESULTS

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #7 TOX 2 INFLUENT (DUP)  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-07A  
**Collection Date:** 07/09/09 12:25  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method:	TO-15			Prep Date/Time:		Analyst:	MAK
1,1,1-Trichloroethane	A	5200	320	1100	ppbv	,00	07/28/09 20:30	J WJ
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	,60	07/29/09 01:59	J
1,1,2-Trichloroethane	A	69	10	30	ppbv	,60	07/29/09 01:59	J
1,1-Dichloroethane	A	1600	42	150	ppbv	300	07/28/09 21:11	J
1,1-Dichloroethene	A	82	10	30	ppbv	,60	07/29/09 01:59	J
1,2-Dichloroethane	A	420	10	30	ppbv	,60	07/29/09 01:59	J
1,2-Dichloropropane	A	120	8.4	30	ppbv	,60	07/29/09 01:59	J
2-Butanone	A	1100	36	590	ppbv	300	07/28/09 21:11	J
2-Hexanone	A	ND	20	120	ppbv	,60	07/29/09 01:59	J WJ
4-Methyl-2-Pentanone	A	430	14	30	ppbv	,60	07/29/09 01:59	J
Acetone	A	1700	170	590	ppbv	300	07/28/09 21:11	B
Benzene	A	4800	36	150	ppbv	300	07/28/09 21:11	J WJ
Bromodichloromethane	A	ND	9	30	ppbv	,60	07/29/09 01:59	J
Bromoform	A	ND	10	30	ppbv	,60	07/29/09 01:59	J
Bromomethane	A	ND	11	30	ppbv	,60	07/29/09 01:59	J
Carbon disulfide	A	ND	11	30	ppbv	,60	07/29/09 01:59	J
Carbon tetrachloride	A	ND	9.6	30	ppbv	,60	07/29/09 01:59	J
Chlorobenzene	A	ND	9.6	30	ppbv	,60	07/29/09 01:59	J
Chloroethane	A	230	10	30	ppbv	,60	07/29/09 01:59	J
Chloroform	A	870	36	150	ppbv	300	07/28/09 21:11	J
Chloromethane	A	17	14	120	J	ppbv	,60	07/29/09 01:59
cis-1,2-Dichloroethene	A	1300	42	150	ppbv	300	07/28/09 21:11	J
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	,60	07/29/09 01:59	J WJ
Dibromochloromethane	A	ND	10	30	ppbv	,60	07/29/09 01:59	J
Ethyl benzene	A	2600	53	150	ppbv	300	07/28/09 21:11	J
m,p-Xylene	A	8800	640	2100	ppbv	,00	07/28/09 20:30	J
Methylene chloride	A	5700	300	4300	ppbv	,00	07/28/09 20:30	J
o-Xylene	A	3600	50	150	ppbv	300	07/28/09 21:11	J
Styrene	A	74	11	30	ppbv	,60	07/29/09 01:59	J
Tetrachloroethene	A	3200	360	1100	ppbv	,00	07/28/09 20:30	J
Toluene	A	21000	380	1100	ppbv	,00	07/28/09 20:30	J
trans-1,2-Dichloroethene	A	31	19	30	ppbv	,60	07/29/09 01:59	J WJ
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	,60	07/29/09 01:59	J
Trichloroethene	A	3900	340	1100	ppbv	,00	07/28/09 20:30	J
Vinyl chloride	A	390	9	30	ppbv	,60	07/29/09 01:59	J
Surr: 4-Bromofluorobenzene	S	88.4	0	77.7-127	%REC	,60	07/29/09 01:59	J

10/10/09

**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #8 TOX 2 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-08A  
**Collection Date:** 07/09/09 11:08  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method: TO-15		Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	220	6.8	23	ppbv	50	07/28/09 13:41	
1,1,2,2-Tetrachloroethane	A	ND	0.22	0.50	ppbv	1	07/28/09 16:26	
1,1,2-Trichloroethane	A	4.1	0.17	0.50	ppbv	1	07/28/09 16:26	
1,1-Dichloroethane	A	44	0.69	2.5	ppbv	5	07/28/09 14:21	
1,1-Dichloroethene	A	96	0.84	2.5	ppbv	5	07/28/09 14:21	
1,2-Dichloroethane	A	13	0.17	0.50	ppbv	1	07/28/09 16:26	
1,2-Dichloropropane	A	3.3	0.14	0.50	ppbv	1	07/28/09 16:26	
2-Butanone	A	35	0.59	9.9	ppbv	5	07/28/09 14:21	
2-Hexanone	A	1.5	0.34	2.0	J	ppbv	1	07/28/09 16:26
4-Methyl-2-Pentanone	A	18	1.2	2.5	ppbv	5	07/28/09 14:21	
Acetone	A	160	25	91	ppbv	50	07/28/09 13:41	B
Benzene	A	200	5.5	23	ppbv	50	07/28/09 13:41	
Bromodichloromethane	A	ND	0.15	0.50	ppbv	1	07/28/09 16:26	
Bromoform	A	ND	0.17	0.50	ppbv	1	07/28/09 16:26	
Bromomethane	A	ND	0.19	0.50	ppbv	1	07/28/09 16:26	
Carbon disulfide	A	ND	0.18	0.50	ppbv	1	07/28/09 16:26	
Carbon tetrachloride	A	0.58	0.16	0.50	ppbv	1	07/28/09 16:26	
Chlorobenzene	A	2.7	0.16	0.50	ppbv	1	07/28/09 16:26	
Chloroethane	A	2.3	0.17	0.50	ppbv	1	07/28/09 16:26	
Chloroform	A	38	0.59	2.5	ppbv	5	07/28/09 14:21	
Chloromethane	A	6.1	0.23	2.0	ppbv	1	07/28/09 16:26	
cis-1,2-Dichloroethene	A	20	0.69	2.5	ppbv	5	07/28/09 14:21	
cis-1,3-Dichloropropene	A	ND	0.14	0.50	ppbv	1	07/28/09 16:26	
Dibromochloromethane	A	ND	0.17	0.50	ppbv	1	07/28/09 16:26	
Ethyl benzene	A	60	0.89	2.5	ppbv	5	07/28/09 14:21	
m,p-Xylene	A	210	14	46	ppbv	50	07/28/09 13:41	
Methylene chloride	A	200	6.4	91	ppbv	50	07/28/09 13:41	
o-Xylene	A	86	7.7	23	ppbv	50	07/28/09 13:41	
Styrene	A	26	0.94	2.5	ppbv	5	07/28/09 14:21	
Tetrachloroethene	A	230	7.7	23	ppbv	50	07/28/09 13:41	
Toluene	A	880	8.2	23	ppbv	50	07/28/09 13:41	
trans-1,2-Dichloroethene	A	5.9	0.31	0.50	ppbv	1	07/28/09 16:26	
trans-1,3-Dichloropropene	A	ND	0.12	0.50	ppbv	1	07/28/09 16:26	
Trichloroethene	A	160	7.3	23	ppbv	50	07/28/09 13:41	
Vinyl chloride	A	19	0.15	0.50	ppbv	1	07/28/09 16:26	
Surr: 4-Bromofluorobenzene	S	93.1	0	77.7-127	%REC	1	07/28/09 16:26	

**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #1 Offsite ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-01B  
**Collection Date:** 07/09/09 11:05  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE Method: TO-13MOD		Prep Date/Time: 07/16/09 13:01 Analyst: BEM						
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	07/17/09 22:31
1,2-Dichlorobenzene	A	1.6	0.7	10	J	µg, Total	1	07/17/09 22:31
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	07/17/09 22:31
1,4-Dichlorobenzene	A	ND	0.9	10		µg, Total	1	07/17/09 22:31
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	07/17/09 22:31
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	07/17/09 22:31
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	07/17/09 22:31
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	07/17/09 22:31
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	07/17/09 22:31
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	07/17/09 22:31
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	07/17/09 22:31
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	07/17/09 22:31
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	07/17/09 22:31
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	07/17/09 22:31
2-Methylphenol	A	ND	0.7	10		µg, Total	1	07/17/09 22:31
2-Nitroaniline	A	ND	1	50		µg, Total	1	07/17/09 22:31
2-Nitrophenol	A	ND	1	10		µg, Total	1	07/17/09 22:31
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	07/17/09 22:31
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	07/17/09 22:31
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	07/17/09 22:31
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	07/17/09 22:31
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	07/17/09 22:31
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	07/17/09 22:31
4-Chloroaniline	A	ND	1	10		µg, Total	1	07/17/09 22:31
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	07/17/09 22:31
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	07/17/09 22:31
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	07/17/09 22:31
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	07/17/09 22:31
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	07/17/09 22:31
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	07/17/09 22:31
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10		µg, Total	1	07/17/09 22:31
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	07/17/09 22:31
Carbazole	A	ND	1.2	10		µg, Total	1	07/17/09 22:31
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	07/17/09 22:31
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	07/17/09 22:31
Dibenzofuran	A	ND	0.8	10		µg, Total	1	07/17/09 22:31
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	07/17/09 22:31
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	07/17/09 22:31
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	07/17/09 22:31

250 West 84th Drive, Merrillville, IN 46410 TEL.800.536.8379 TEL.219.769.8378 FAX.219.769.1664

**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #1 Offsite ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-01B  
**Collection Date:** 07/09/09 11:05  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD						
		Prep Date/Time: 07/16/09 13:01 Analyst: BEM						
Hexachlorobutadiene	A	ND	0.9	10		µg, Total	1	07/17/09 22:31
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	07/17/09 22:31
Hexachloroethane	A	ND	0.9	10		µg, Total	1	07/17/09 22:31
Isophorone	A	1.6	1	10	J	µg, Total	1	07/17/09 22:31
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	07/17/09 22:31
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	07/17/09 22:31
Nitrobenzene	A	ND	1	10		µg, Total	1	07/17/09 22:31
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	07/17/09 22:31
Phenol	A	ND	0.4	10		µg, Total	1	07/17/09 22:31
Surr: 2,4,6-Tribromophenol	S	53.7	0	40.5-97		%REC	1	07/17/09 22:31
Surr: 2-Fluorobiphenyl	S	46.6	0	32.7-83.2		%REC	1	07/17/09 22:31
Surr: 2-Fluorophenol	S	49.8	0	20.5-87.9		%REC	1	07/17/09 22:31
Surr: Nitrobenzene-d5	S	57.7	0	33.7-77.1		%REC	1	07/17/09 22:31
Surr: Phenol-d5	S	59.1	0	32.7-80.9		%REC	1	07/17/09 22:31
Surr: Terphenyl-d14	S	44.0	0	22.7-96.5		%REC	1	07/17/09 22:31

PAHS BY GC/MS-SIM		Method: TO-13						
		Prep Date/Time: 07/16/09 13:01 Analyst: BEM						
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	07/17/09 22:31
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	07/17/09 22:31
Anthracene	A	ND	0.27	1.0		µg, Total	1	07/17/09 22:31
Benz[a]anthracene	A	ND	0.47	1.0		µg, Total	1	07/17/09 22:31
Benz[a]pyrene	A	ND	0.38	1.0		µg, Total	1	07/17/09 22:31
Benz[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	07/17/09 22:31
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	07/17/09 22:31
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	07/17/09 22:31
Chrysene	A	ND	0.57	1.0		µg, Total	1	07/17/09 22:31
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	07/17/09 22:31
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	07/17/09 22:31
Fluorene	A	ND	0.25	1.0		µg, Total	1	07/17/09 22:31
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	07/17/09 22:31
Naphthalene	A	2.7	0.16	1.0		µg, Total	1	07/17/09 22:31
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	07/17/09 22:31
Pyrene	A	ND	0.44	1.0		µg, Total	1	07/17/09 22:31
Surr: Nitrobenzene-d5	S	57.7	0	33.7-77.1		%REC	1	07/17/09 22:31
Surr: 2-Fluorobiphenyl	S	46.6	0	32.7-83.2		%REC	1	07/17/09 22:31
Surr: Terphenyl-d14	S	44.0	0	22.7-96.5		%REC	1	07/17/09 22:31

10/9/09

**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #2 SBPA ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-02B  
**Collection Date:** 07/09/09 11:30  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD						
						Prep Date/Time: 07/16/09 13:01	Analyst: BEM	
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	07/17/09 22:50
1,2-Dichlorobenzene	A	2.1	0.7	10	J	µg, Total	1	07/17/09 22:50
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	07/17/09 22:50
1,4-Dichlorobenzene	A	ND	0.9	10		µg, Total	1	07/17/09 22:50
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	07/17/09 22:50
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	07/17/09 22:50
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	07/17/09 22:50
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	07/17/09 22:50
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	07/17/09 22:50
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	07/17/09 22:50
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	07/17/09 22:50
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	07/17/09 22:50
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	07/17/09 22:50
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	07/17/09 22:50
2-Methylphenol	A	ND	0.7	10		µg, Total	1	07/17/09 22:50
2-Nitroaniline	A	ND	1	50		µg, Total	1	07/17/09 22:50
2-Nitrophenol	A	ND	1	10		µg, Total	1	07/17/09 22:50
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	07/17/09 22:50
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	07/17/09 22:50
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	07/17/09 22:50
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	07/17/09 22:50
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	07/17/09 22:50
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	07/17/09 22:50
4-Chloroaniline	A	ND	1	10		µg, Total	1	07/17/09 22:50
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	07/17/09 22:50
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	07/17/09 22:50
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	07/17/09 22:50
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	07/17/09 22:50
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	07/17/09 22:50
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	07/17/09 22:50
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10		µg, Total	1	07/17/09 22:50
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	07/17/09 22:50
Carbazole	A	ND	1.2	10		µg, Total	1	07/17/09 22:50
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	07/17/09 22:50
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	07/17/09 22:50
Dibenzofuran	A	ND	0.8	10		µg, Total	1	07/17/09 22:50
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	07/17/09 22:50
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	07/17/09 22:50
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	07/17/09 22:50

250 West 84th Drive. Merrillville, IN 46410 TEL.800.536.8379 TEL.219.769.8378 FAX.219.769.1664

**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #2 SBPA ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-02B  
**Collection Date:** 07/09/09 11:30  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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<b>SEMI-VOLATILE ORGANIC ANALYTE</b>		Method: TO-13MOD Prep Date/Time: 07/16/09 13:01 Analyst: BEM						
Hexachlorobutadiene	A	ND	0.9	10	µg, Total	1	07/17/09 22:50	
Hexachlorocyclopentadiene	A	ND	0.6	10	µg, Total	1	07/17/09 22:50	
Hexachloroethane	A	ND	0.9	10	µg, Total	1	07/17/09 22:50	
Isophorone	A	ND	1	10	µg, Total	1	07/17/09 22:50	
N-Nitrosodi-n-propylamine	A	ND	1	10	µg, Total	1	07/17/09 22:50	
N-Nitrosodiphenylamine	A	ND	0.7	10	µg, Total	1	07/17/09 22:50	
Nitrobenzene	A	ND	1	10	µg, Total	1	07/17/09 22:50	
Pentachlorophenol	A	ND	1.3	50	µg, Total	1	07/17/09 22:50	
Phenol	A	ND	0.4	10	µg, Total	1	07/17/09 22:50	
<i>Surr: 2,4,6-Tribromophenol</i>	S	58.1	0	40.5-97	%REC	1	07/17/09 22:50	
<i>Surr: 2-Fluorobiphenyl</i>	S	39.5	0	32.7-83.2	%REC	1	07/17/09 22:50	
<i>Surr: 2-Fluorophenol</i>	S	38.2	0	20.5-87.9	%REC	1	07/17/09 22:50	
<i>Surr: Nitrobenzene-d5</i>	S	44.8	0	33.7-77.1	%REC	1	07/17/09 22:50	
<i>Surr: Phenol-d5</i>	S	47.8	0	32.7-80.9	%REC	1	07/17/09 22:50	
<i>Surr: Terphenyl-d14</i>	S	49.8	0	22.7-96.5	%REC	1	07/17/09 22:50	

<b>PAHS BY GC/MS-SIM</b>		Method: TO-13 Prep Date/Time: 07/16/09 13:01 Analyst: BEM						
Acenaphthene	A	ND	0.21	1.0	µg, Total	1	07/17/09 22:50	
Acenaphthylene	A	ND	0.22	1.0	µg, Total	1	07/17/09 22:50	
Anthracene	A	ND	0.27	1.0	µg, Total	1	07/17/09 22:50	
Benzo[a]anthracene	A	ND	0.47	1.0	µg, Total	1	07/17/09 22:50	
Benzo[a]pyrene	A	ND	0.38	1.0	µg, Total	1	07/17/09 22:50	
Benzo[b]fluoranthene	A	ND	0.44	1.0	µg, Total	1	07/17/09 22:50	
Benzo[g,h,i]perylene	A	ND	0.72	1.0	µg, Total	1	07/17/09 22:50	
Benzo[k]fluoranthene	A	ND	0.8	1.0	µg, Total	1	07/17/09 22:50	
Chrysene	A	ND	0.57	1.0	µg, Total	1	07/17/09 22:50	
Dibenz[a,h]anthracene	A	ND	0.54	1.0	µg, Total	1	07/17/09 22:50	
Fluoranthene	A	ND	0.39	1.0	µg, Total	1	07/17/09 22:50	
Fluorene	A	ND	0.25	1.0	µg, Total	1	07/17/09 22:50	
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0	µg, Total	1	07/17/09 22:50	
Naphthalene	A	ND	0.16	1.0	µg, Total	1	07/17/09 22:50	
Phenanthrene	A	ND	0.27	1.0	µg, Total	1	07/17/09 22:50	
Pyrene	A	ND	0.44	1.0	µg, Total	1	07/17/09 22:50	
<i>Surr: Nitrobenzene-d5</i>	S	44.8	0	33.7-77.1	%REC	1	07/17/09 22:50	
<i>Surr: 2-Fluorobiphenyl</i>	S	39.5	0	32.7-83.2	%REC	1	07/17/09 22:50	
<i>Surr: Terphenyl-d14</i>	S	49.8	0	22.7-96.5	%REC	1	07/17/09 22:50	

10/10/09

**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #3 TOX 1 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-03B  
**Collection Date:** 07/09/09 11:35  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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<b>SEMI-VOLATILE ORGANIC ANALYTE</b>		Method: TO-13MOD Prep Date/Time: 07/16/09 13:01 Analyst: BEM						
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	07/17/09 23:09
1,2-Dichlorobenzene	A	2.2	0.7	10	J	µg, Total	1	07/17/09 23:09
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	07/17/09 23:09
1,4-Dichlorobenzene	A	ND	0.9	10		µg, Total	1	07/17/09 23:09
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	07/17/09 23:09
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	07/17/09 23:09
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	07/17/09 23:09
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	07/17/09 23:09
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	07/17/09 23:09
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	07/17/09 23:09
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	07/17/09 23:09
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	07/17/09 23:09
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	07/17/09 23:09
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	07/17/09 23:09
2-Methylphenol	A	ND	0.7	10		µg, Total	1	07/17/09 23:09
2-Nitroaniline	A	ND	1	50		µg, Total	1	07/17/09 23:09
2-Nitrophenol	A	ND	1	10		µg, Total	1	07/17/09 23:09
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	07/17/09 23:09
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	07/17/09 23:09
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	07/17/09 23:09
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	07/17/09 23:09
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	07/17/09 23:09
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	07/17/09 23:09
4-Chloroaniline	A	ND	1	10		µg, Total	1	07/17/09 23:09
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	07/17/09 23:09
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	07/17/09 23:09
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	07/17/09 23:09
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	07/17/09 23:09
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	07/17/09 23:09
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	07/17/09 23:09
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10		µg, Total	1	07/17/09 23:09
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	07/17/09 23:09
Carbazole	A	ND	1.2	10		µg, Total	1	07/17/09 23:09
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	07/17/09 23:09
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	07/17/09 23:09
Dibenzofuran	A	ND	0.8	10		µg, Total	1	07/17/09 23:09
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	07/17/09 23:09
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	07/17/09 23:09
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	07/17/09 23:09

250 West 84th Drive. Merrillville, IN 46410 TEL.800.536.8379 TEL.219.769.8378 FAX.219.769.1664

**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #3 TOX 1 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-03B  
**Collection Date:** 07/09/09 11:35  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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<b>SEMI-VOLATILE ORGANIC ANALYTE</b>		Method: TO-13MOD						
		Prep Date/Time: 07/16/09 13:01 Analyst: BEM						
Hexachlorobutadiene	A	ND	0.9	10	µg, Total	1	07/17/09 23:09	
Hexachlorocyclopentadiene	A	ND	0.6	10	µg, Total	1	07/17/09 23:09	
Hexachloroethane	A	ND	0.9	10	µg, Total	1	07/17/09 23:09	
Isophorone	A	ND	1	10	µg, Total	1	07/17/09 23:09	
N-Nitrosodi-n-propylamine	A	ND	1	10	µg, Total	1	07/17/09 23:09	
N-Nitrosodiphenylamine	A	ND	0.7	10	µg, Total	1	07/17/09 23:09	
Nitrobenzene	A	ND	1	10	µg, Total	1	07/17/09 23:09	
Pentachlorophenol	A	ND	1.3	50	µg, Total	1	07/17/09 23:09	
Phenol	A	ND	0.4	10	µg, Total	1	07/17/09 23:09	
Surr: 2,4,6-Tribromophenol	S	69.9	0	40.5-97	%REC	1	07/17/09 23:09	
Surr: 2-Fluorobiphenyl	S	64.1	0	32.7-83.2	%REC	1	07/17/09 23:09	
Surr: 2-Fluorophenol	S	66.0	0	20.5-87.9	%REC	1	07/17/09 23:09	
Surr: Nitrobenzene-d5	S	76.6	0	33.7-77.1	%REC	1	07/17/09 23:09	
Surr: Phenol-d5	S	76.2	0	32.7-80.9	%REC	1	07/17/09 23:09	
Surr: Terphenyl-d14	S	58.2	0	22.7-96.5	%REC	1	07/17/09 23:09	

<b>PAHS BY GC/MS-SIM</b>		Method: TO-13						
		Prep Date/Time: 07/16/09 13:01 Analyst: BEM						
Acenaphthene	A	ND	0.21	1.0	µg, Total	1	07/17/09 23:09	
Acenaphthylene	A	ND	0.22	1.0	µg, Total	1	07/17/09 23:09	
Anthracene	A	ND	0.27	1.0	µg, Total	1	07/17/09 23:09	
Benzo[a]anthracene	A	ND	0.47	1.0	µg, Total	1	07/17/09 23:09	
Benzo[a]pyrene	A	ND	0.38	1.0	µg, Total	1	07/17/09 23:09	
Benzo[b]fluoranthene	A	ND	0.44	1.0	µg, Total	1	07/17/09 23:09	
Benzo[g,h,i]perylene	A	ND	0.72	1.0	µg, Total	1	07/17/09 23:09	
Benzo[k]fluoranthene	A	ND	0.8	1.0	µg, Total	1	07/17/09 23:09	
Chrysene	A	ND	0.57	1.0	µg, Total	1	07/17/09 23:09	
Dibenz[a,h]anthracene	A	ND	0.54	1.0	µg, Total	1	07/17/09 23:09	
Fluoranthene	A	ND	0.39	1.0	µg, Total	1	07/17/09 23:09	
Fluorene	A	ND	0.25	1.0	µg, Total	1	07/17/09 23:09	
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0	µg, Total	1	07/17/09 23:09	
Naphthalene	A	0.78	0.16	1.0	J	µg, Total	1	07/17/09 23:09
Phenanthrene	A	ND	0.27	1.0	µg, Total	1	07/17/09 23:09	
Pyrene	A	ND	0.44	1.0	µg, Total	1	07/17/09 23:09	
Surr: Nitrobenzene-d5	S	76.6	0	33.7-77.1	%REC	1	07/17/09 23:09	
Surr: 2-Fluorobiphenyl	S	64.1	0	32.7-83.2	%REC	1	07/17/09 23:09	
Surr: Terphenyl-d14	S	58.2	0	22.7-96.5	%REC	1	07/17/09 23:09	

**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #4 TOX 1 INFLUENT(DUP)  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-04B  
**Collection Date:** 07/09/09 11:50  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD						
		Prep Date/Time: 07/16/09 13:01 Analyst: BEM						
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	07/17/09 23:28
1,2-Dichlorobenzene	A	1	0.7	10	J	µg, Total	1	07/17/09 23:28
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	07/17/09 23:28
1,4-Dichlorobenzene	A	ND	0.9	10		µg, Total	1	07/17/09 23:28
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	07/17/09 23:28
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	07/17/09 23:28
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	07/17/09 23:28
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	07/17/09 23:28
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	07/17/09 23:28
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	07/17/09 23:28
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	07/17/09 23:28
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	07/17/09 23:28
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	07/17/09 23:28
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	07/17/09 23:28
2-Methylphenol	A	ND	0.7	10		µg, Total	1	07/17/09 23:28
2-Nitroaniline	A	ND	1	50		µg, Total	1	07/17/09 23:28
2-Nitrophenol	A	ND	1	10		µg, Total	1	07/17/09 23:28
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	07/17/09 23:28
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	07/17/09 23:28
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	07/17/09 23:28
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	07/17/09 23:28
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	07/17/09 23:28
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	07/17/09 23:28
4-Chloroaniline	A	ND	1	10		µg, Total	1	07/17/09 23:28
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	07/17/09 23:28
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	07/17/09 23:28
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	07/17/09 23:28
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	07/17/09 23:28
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	07/17/09 23:28
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	07/17/09 23:28
Bis(2-ethylhexyl)phthalate	A	1.5	1.1	10	Jb	µg, Total	1	07/17/09 23:28
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	07/17/09 23:28
Carbazole	A	ND	1.2	10		µg, Total	1	07/17/09 23:28
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	07/17/09 23:28
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	07/17/09 23:28
Dibenzofuran	A	ND	0.8	10		µg, Total	1	07/17/09 23:28
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	07/17/09 23:28
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	07/17/09 23:28
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	07/17/09 23:28

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## ANALYTICAL RESULTS

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #4 TOX 1 INFLUENT(DUP)  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-04B  
**Collection Date:** 07/09/09 11:50  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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<b>SEMI-VOLATILE ORGANIC ANALYTE</b>		Method: TO-13MOD						
		Prep Date/Time: 07/16/09 13:01 Analyst: BEM						
Hexachlorobutadiene	A	ND	0.9	10		µg, Total	1	07/17/09 23:28
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	07/17/09 23:28
Hexachloroethane	A	ND	0.9	10		µg, Total	1	07/17/09 23:28
Isophorone	A	ND	1	10		µg, Total	1	07/17/09 23:28
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	07/17/09 23:28
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	07/17/09 23:28
Nitrobenzene	A	ND	1	10		µg, Total	1	07/17/09 23:28
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	07/17/09 23:28
Phenol	A	ND	0.4	10		µg, Total	1	07/17/09 23:28
<i>Surr: 2,4,6-Tribromophenol</i>	S	73.8	0	40.5-97		%REC	1	07/17/09 23:28
<i>Surr: 2-Fluorobiphenyl</i>	S	49.0	0	32.7-83.2		%REC	1	07/17/09 23:28
<i>Surr: 2-Fluorophenol</i>	S	36.7	0	20.5-87.9		%REC	1	07/17/09 23:28
<i>Surr: Nitrobenzene-d5</i>	S	55.2	0	33.7-77.1		%REC	1	07/17/09 23:28
<i>Surr: Phenol-d5</i>	S	57.7	0	32.7-80.9		%REC	1	07/17/09 23:28
<i>Surr: Terphenyl-d14</i>	S	65.5	0	22.7-96.5		%REC	1	07/17/09 23:28

<b>PAHS BY GC/MS-SIM</b>		Method: TO-13						
		Prep Date/Time: 07/16/09 13:01 Analyst: BEM						
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	07/17/09 23:28
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	07/17/09 23:28
Anthracene	A	ND	0.27	1.0		µg, Total	1	07/17/09 23:28
Benzof[a]anthracene	A	ND	0.47	1.0		µg, Total	1	07/17/09 23:28
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	07/17/09 23:28
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	07/17/09 23:28
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	07/17/09 23:28
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	07/17/09 23:28
Chrysene	A	ND	0.57	1.0		µg, Total	1	07/17/09 23:28
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	07/17/09 23:28
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	07/17/09 23:28
Fluorene	A	ND	0.25	1.0		µg, Total	1	07/17/09 23:28
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	07/17/09 23:28
Naphthalene	A	ND	0.16	1.0		µg, Total	1	07/17/09 23:28
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	07/17/09 23:28
Pyrene	A	ND	0.44	1.0		µg, Total	1	07/17/09 23:28
<i>Surr: Nitrobenzene-d5</i>	S	55.2	0	33.7-77.1		%REC	1	07/17/09 23:28
<i>Surr: 2-Fluorobiphenyl</i>	S	49.0	0	32.7-83.2		%REC	1	07/17/09 23:28
<i>Surr: Terphenyl-d14</i>	S	65.5	0	22.7-96.5		%REC	1	07/17/09 23:28

**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #5 TOX 1 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-05B  
**Collection Date:** 07/09/09 11:45  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD						
		Prep Date/Time: 07/16/09 13:01 Analyst: BEM						
Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	07/17/09 23:47
1,2-Dichlorobenzene	A	ND	0.7	10		µg, Total	1	07/17/09 23:47
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	07/17/09 23:47
1,4-Dichlorobenzene	A	ND	0.9	10		µg, Total	1	07/17/09 23:47
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	07/17/09 23:47
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	07/17/09 23:47
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	07/17/09 23:47
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	07/17/09 23:47
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	07/17/09 23:47
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	07/17/09 23:47
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	07/17/09 23:47
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	07/17/09 23:47
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	07/17/09 23:47
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	07/17/09 23:47
2-Methylphenol	A	ND	0.7	10		µg, Total	1	07/17/09 23:47
2-Nitroaniline	A	ND	1	50		µg, Total	1	07/17/09 23:47
2-Nitrophenol	A	ND	1	10		µg, Total	1	07/17/09 23:47
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	07/17/09 23:47
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	07/17/09 23:47
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	07/17/09 23:47
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	07/17/09 23:47
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	07/17/09 23:47
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	07/17/09 23:47
4-Chloroaniline	A	ND	1	10		µg, Total	1	07/17/09 23:47
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	07/17/09 23:47
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	07/17/09 23:47
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	07/17/09 23:47
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	07/17/09 23:47
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	07/17/09 23:47
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	07/17/09 23:47
Bis(2-ethylhexyl)phthalate	A	1.2	1.1	10	Jb	µg, Total	1	07/17/09 23:47
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	07/17/09 23:47
Carbazole	A	ND	1.2	10		µg, Total	1	07/17/09 23:47
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	07/17/09 23:47
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	07/17/09 23:47
Dibenzofuran	A	ND	0.8	10		µg, Total	1	07/17/09 23:47
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	07/17/09 23:47
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	07/17/09 23:47
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	07/17/09 23:47

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**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #5 TOX 1 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-05B  
**Collection Date:** 07/09/09 11:45  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD						
		Prep Date/Time: 07/16/09 13:01 Analyst: BEM						
		A	ND	0.9	10	µg, Total	1	07/17/09 23:47
Hexachlorobutadiene		A	ND	0.6	10	µg, Total	1	07/17/09 23:47
Hexachlorocyclopentadiene		A	ND	0.9	10	µg, Total	1	07/17/09 23:47
Hexachloroethane		A	ND	1	10	µg, Total	1	07/17/09 23:47
Isophorone		A	ND	1	10	µg, Total	1	07/17/09 23:47
N-Nitrosodi-n-propylamine		A	ND	0.7	10	µg, Total	1	07/17/09 23:47
N-Nitrosodiphenylamine		A	ND	1	10	µg, Total	1	07/17/09 23:47
Nitrobenzene		A	ND	1.3	50	µg, Total	1	07/17/09 23:47
Pentachlorophenol		A	ND	0.4	10	µg, Total	1	07/17/09 23:47
Phenol		S	63.1	0	40.5-97	%REC	1	07/17/09 23:47
<i>Surr: 2,4,6-Tribromophenol</i>		S	44.2	0	32.7-83.2	%REC	1	07/17/09 23:47
<i>Surr: 2-Fluorobiphenyl</i>		S	41.0	0	20.5-87.9	%REC	1	07/17/09 23:47
<i>Surr: 2-Fluorophenol</i>		S	48.3	0	33.7-77.1	%REC	1	07/17/09 23:47
<i>Surr: Nitrobenzene-d5</i>		S	48.6	0	32.7-80.9	%REC	1	07/17/09 23:47
<i>Surr: Phenol-d5</i>		S	50.0	0	22.7-96.5	%REC	1	07/17/09 23:47
<i>Surr: Terphenyl-d14</i>								

PAHS BY GC/MS-SIM		Method: TO-13						
		Prep Date/Time: 07/16/09 13:01 Analyst: BEM						
		A	ND	0.21	1.0	µg, Total	1	07/17/09 23:47
Acenaphthene		A	ND	0.22	1.0	µg, Total	1	07/17/09 23:47
Acenaphthylene		A	ND	0.27	1.0	µg, Total	1	07/17/09 23:47
Anthracene		A	ND	0.47	1.0	µg, Total	1	07/17/09 23:47
Benzo[a]anthracene		A	ND	0.38	1.0	µg, Total	1	07/17/09 23:47
Benzo[a]pyrene		A	ND	0.44	1.0	µg, Total	1	07/17/09 23:47
Benzo[b]fluoranthene		A	ND	0.72	1.0	µg, Total	1	07/17/09 23:47
Benzo[g,h,i]perylene		A	ND	0.8	1.0	µg, Total	1	07/17/09 23:47
Chrysene		A	ND	0.57	1.0	µg, Total	1	07/17/09 23:47
Dibenz[a,h]anthracene		A	ND	0.54	1.0	µg, Total	1	07/17/09 23:47
Fluoranthene		A	ND	0.39	1.0	µg, Total	1	07/17/09 23:47
Fluorene		A	ND	0.25	1.0	µg, Total	1	07/17/09 23:47
Indeno[1,2,3cd]pyrene		A	ND	0.56	1.0	µg, Total	1	07/17/09 23:47
Naphthalene		A	ND	0.16	1.0	µg, Total	1	07/17/09 23:47
Phenanthrene		A	ND	0.27	1.0	µg, Total	1	07/17/09 23:47
Pyrene		A	ND	0.44	1.0	µg, Total	1	07/17/09 23:47
<i>Surr: Nitrobenzene-d5</i>		S	48.3	0	33.7-77.1	%REC	1	07/17/09 23:47
<i>Surr: 2-Fluorobiphenyl</i>		S	44.2	0	32.7-83.2	%REC	1	07/17/09 23:47
<i>Surr: Terphenyl-d14</i>		S	50.0	0	22.7-96.5	%REC	1	07/17/09 23:47

Ma/09

**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #6 TOX 2 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-06B  
**Collection Date:** 07/09/09 12:10  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method:	TO-13MOD	Prep Date/Time: 07/16/09 13:01 Analyst: BEM					
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	07/18/09 00:06
1,2-Dichlorobenzene	A	ND	0.7	10		µg, Total	1	07/18/09 00:06
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	07/18/09 00:06
1,4-Dichlorobenzene	A	ND	0.9	10		µg, Total	1	07/18/09 00:06
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	07/18/09 00:06
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	07/18/09 00:06
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	07/18/09 00:06
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	07/18/09 00:06
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	07/18/09 00:06
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	07/18/09 00:06
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	07/18/09 00:06
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	07/18/09 00:06
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	07/18/09 00:06
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	07/18/09 00:06
2-Methylphenol	A	ND	0.7	10		µg, Total	1	07/18/09 00:06
2-Nitroaniline	A	ND	1	50		µg, Total	1	07/18/09 00:06
2-Nitrophenol	A	ND	1	10		µg, Total	1	07/18/09 00:06
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	07/18/09 00:06
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	07/18/09 00:06
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	07/18/09 00:06
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	07/18/09 00:06
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	07/18/09 00:06
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	07/18/09 00:06
4-Chloroaniline	A	ND	1	10		µg, Total	1	07/18/09 00:06
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	07/18/09 00:06
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	07/18/09 00:06
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	07/18/09 00:06
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	07/18/09 00:06
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	07/18/09 00:06
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	07/18/09 00:06
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10		µg, Total	1	07/18/09 00:06
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	07/18/09 00:06
Carbazole	A	ND	1.2	10		µg, Total	1	07/18/09 00:06
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	07/18/09 00:06
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	07/18/09 00:06
Dibenzofuran	A	ND	0.8	10		µg, Total	1	07/18/09 00:06
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	07/18/09 00:06
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	07/18/09 00:06
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	07/18/09 00:06

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**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #6 TOX 2 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-06B  
**Collection Date:** 07/09/09 12:10  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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<b>SEMI-VOLATILE ORGANIC ANALYTE</b>		Method: TO-13MOD		Prep Date/Time: 07/16/09 13:01				Analyst: BEM
Hexachlorobutadiene	A	ND	0.9	10		µg, Total	1	07/18/09 00:06
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	07/18/09 00:06
Hexachloroethane	A	ND	0.9	10		µg, Total	1	07/18/09 00:06
Isophorone	A	ND	1	10		µg, Total	1	07/18/09 00:06
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	07/18/09 00:06
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	07/18/09 00:06
Nitrobenzene	A	ND	1	10		µg, Total	1	07/18/09 00:06
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	07/18/09 00:06
Phenol	A	ND	0.4	10		µg, Total	1	07/18/09 00:06
Surr: 2,4,6-Tribromophenol	S	56.3	0	40.5-97		%REC	1	07/18/09 00:06
Surr: 2-Fluorobiphenyl	S	47.7	0	32.7-83.2		%REC	1	07/18/09 00:06
Surr: 2-Fluorophenol	S	44.4	0	20.5-87.9		%REC	1	07/18/09 00:06
Surr: Nitrobenzene-d5	S	54.2	0	33.7-77.1		%REC	1	07/18/09 00:06
Surr: Phenol-d5	S	54.3	0	32.7-80.9		%REC	1	07/18/09 00:06
Surr: Terphenyl-d14	S	43.8	0	22.7-96.5		%REC	1	07/18/09 00:06

<b>PAHS BY GC/MS-SIM</b>		Method: TO-13		Prep Date/Time: 07/16/09 13:01				Analyst: BEM
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	07/18/09 00:06
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	07/18/09 00:06
Anthracene	A	ND	0.27	1.0		µg, Total	1	07/18/09 00:06
Benzo[a]anthracene	A	ND	0.47	1.0		µg, Total	1	07/18/09 00:06
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	07/18/09 00:06
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	07/18/09 00:06
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	07/18/09 00:06
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	07/18/09 00:06
Chrysene	A	ND	0.57	1.0		µg, Total	1	07/18/09 00:06
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	07/18/09 00:06
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	07/18/09 00:06
Fluorene	A	ND	0.25	1.0		µg, Total	1	07/18/09 00:06
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	07/18/09 00:06
Naphthalene	A	1.3	0.16	1.0		µg, Total	1	07/18/09 00:06
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	07/18/09 00:06
Pyrene	A	ND	0.44	1.0		µg, Total	1	07/18/09 00:06
Surr: Nitrobenzene-d5	S	54.2	0	33.7-77.1		%REC	1	07/18/09 00:06
Surr: 2-Fluorobiphenyl	S	47.7	0	32.7-83.2		%REC	1	07/18/09 00:06
Surr: Terphenyl-d14	S	43.8	0	22.7-96.5		%REC	1	07/18/09 00:06

6/19/09

**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #7 TOX 2 INFLUENT (DUP)  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-07B  
**Collection Date:** 07/09/09 12:25  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method: TO-13MOD		Prep Date/Time: 07/16/09 13:01 Analyst: BEM					
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	07/18/09 00:25
1,2-Dichlorobenzene	A	ND	0.7	10		µg, Total	1	07/18/09 00:25
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	07/18/09 00:25
1,4-Dichlorobenzene	A	ND	0.9	10		µg, Total	1	07/18/09 00:25
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	07/18/09 00:25
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	07/18/09 00:25
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	07/18/09 00:25
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	07/18/09 00:25
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	07/18/09 00:25
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	07/18/09 00:25
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	07/18/09 00:25
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	07/18/09 00:25
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	07/18/09 00:25
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	07/18/09 00:25
2-Methylphenol	A	ND	0.7	10		µg, Total	1	07/18/09 00:25
2-Nitroaniline	A	ND	1	50		µg, Total	1	07/18/09 00:25
2-Nitrophenol	A	ND	1	10		µg, Total	1	07/18/09 00:25
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	07/18/09 00:25
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	07/18/09 00:25
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	07/18/09 00:25
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	07/18/09 00:25
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	07/18/09 00:25
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	07/18/09 00:25
4-Chloroaniline	A	ND	1	10		µg, Total	1	07/18/09 00:25
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	07/18/09 00:25
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	07/18/09 00:25
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	07/18/09 00:25
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	07/18/09 00:25
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	07/18/09 00:25
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	07/18/09 00:25
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10		µg, Total	1	07/18/09 00:25
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	07/18/09 00:25
Carbazole	A	ND	1.2	10		µg, Total	1	07/18/09 00:25
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	07/18/09 00:25
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	07/18/09 00:25
Dibenzofuran	A	ND	0.8	10		µg, Total	1	07/18/09 00:25
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	07/18/09 00:25
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	07/18/09 00:25
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	07/18/09 00:25

250 West 84th Drive, Merrillville, IN 46410 TEL.800.536.8379 TEL.219.769.8378 FAX.219.769.1664

10/9/09

**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #7 TOX 2 INFLUENT (DUP)  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-07B  
**Collection Date:** 07/09/09 12:25  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD		Prep Date/Time: 07/16/09 13:01				Analyst: BEM
Hexachlorobutadiene	A	ND	0.9	10	µg, Total	1	07/18/09 00:25	
Hexachlorocyclopentadiene	A	ND	0.6	10	µg, Total	1	07/18/09 00:25	
Hexachloroethane	A	ND	0.9	10	µg, Total	1	07/18/09 00:25	
Isophorone	A	ND	1	10	µg, Total	1	07/18/09 00:25	
N-Nitrosodi-n-propylamine	A	ND	1	10	µg, Total	1	07/18/09 00:25	
N-Nitrosodiphenylamine	A	ND	0.7	10	µg, Total	1	07/18/09 00:25	
Nitrobenzene	A	ND	1	10	µg, Total	1	07/18/09 00:25	
Pentachlorophenol	A	ND	1.3	50	µg, Total	1	07/18/09 00:25	
Phenol	A	ND	0.4	10	µg, Total	1	07/18/09 00:25	
Surr: 2,4,6-Tribromophenol	S	54.6	0	40.5-97	%REC	1	07/18/09 00:25	
Surr: 2-Fluorobiphenyl	S	41.2	0	32.7-83.2	%REC	1	07/18/09 00:25	
Surr: 2-Fluorophenol	S	38.9	0	20.5-87.9	%REC	1	07/18/09 00:25	
Surr: Nitrobenzene-d5	S	47.6	0	33.7-77.1	%REC	1	07/18/09 00:25	
Surr: Phenol-d5	S	49.9	0	32.7-80.9	%REC	1	07/18/09 00:25	
Surr: Terphenyl-d14	S	46.6	0	22.7-96.5	%REC	1	07/18/09 00:25	

PAHS BY GC/MS-SIM		Method: TO-13		Prep Date/Time: 07/16/09 13:01				Analyst: BEM
Acenaphthene	A	ND	0.21	1.0	µg, Total	1	07/18/09 00:25	
Acenaphthylene	A	ND	0.22	1.0	µg, Total	1	07/18/09 00:25	
Anthracene	A	ND	0.27	1.0	µg, Total	1	07/18/09 00:25	
Benz[a]anthracene	A	ND	0.47	1.0	µg, Total	1	07/18/09 00:25	
Benz[a]pyrene	A	ND	0.38	1.0	µg, Total	1	07/18/09 00:25	
Benz[b]fluoranthene	A	ND	0.44	1.0	µg, Total	1	07/18/09 00:25	
Benz[g,h,i]perylene	A	ND	0.72	1.0	µg, Total	1	07/18/09 00:25	
Benz[k]fluoranthene	A	ND	0.8	1.0	µg, Total	1	07/18/09 00:25	
Chrysene	A	ND	0.57	1.0	µg, Total	1	07/18/09 00:25	
Dibenz[a,h]anthracene	A	ND	0.54	1.0	µg, Total	1	07/18/09 00:25	
Fluoranthene	A	ND	0.39	1.0	µg, Total	1	07/18/09 00:25	
Fluorene	A	ND	0.25	1.0	µg, Total	1	07/18/09 00:25	
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0	µg, Total	1	07/18/09 00:25	
Naphthalene	A	1.2	0.16	1.0	µg, Total	1	07/18/09 00:25	
Phenanthrene	A	ND	0.27	1.0	µg, Total	1	07/18/09 00:25	
Pyrene	A	ND	0.44	1.0	µg, Total	1	07/18/09 00:25	
Surr: Nitrobenzene-d5	S	47.6	0	33.7-77.1	%REC	1	07/18/09 00:25	
Surr: 2-Fluorobiphenyl	S	41.2	0	32.7-83.2	%REC	1	07/18/09 00:25	
Surr: Terphenyl-d14	S	46.6	0	22.7-96.5	%REC	1	07/18/09 00:25	

**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #8 TOX 2 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-08B  
**Collection Date:** 07/09/09 11:08  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD						
		Prep Date/Time: 07/16/09 13:01 Analyst: BEM						
		A	ND	0.9	10	µg, Total	1	07/18/09 00:44
1,2,4-Trichlorobenzene		A	ND	0.7	10	µg, Total	1	07/18/09 00:44
1,2-Dichlorobenzene		A	ND	0.8	10	µg, Total	1	07/18/09 00:44
1,3-Dichlorobenzene		A	ND	0.9	10	µg, Total	1	07/18/09 00:44
1,4-Dichlorobenzene		A	ND	1.5	10	µg, Total	1	07/18/09 00:44
2,4,5-Trichlorophenol		A	ND	0.9	10	µg, Total	1	07/18/09 00:44
2,4,6-Trichlorophenol		A	ND	0.8	10	µg, Total	1	07/18/09 00:44
2,4-Dichlorophenol		A	ND	0.7	10	µg, Total	1	07/18/09 00:44
2,4-Dimethylphenol		A	ND	0.8	10	µg, Total	1	07/18/09 00:44
2,4-Dinitrophenol		A	ND	9.4	50	µg, Total	1	07/18/09 00:44
2,4-Dinitrotoluene		A	ND	0.8	10	µg, Total	1	07/18/09 00:44
2,6-Dinitrotoluene		A	ND	1.1	10	µg, Total	1	07/18/09 00:44
2-Chloronaphthalene		A	ND	0.9	10	µg, Total	1	07/18/09 00:44
2-Chlorophenol		A	ND	0.7	10	µg, Total	1	07/18/09 00:44
2-Methylnaphthalene		A	ND	0.9	10	µg, Total	1	07/18/09 00:44
2-Methylphenol		A	ND	0.7	10	µg, Total	1	07/18/09 00:44
2-Nitroaniline		A	ND	1	50	µg, Total	1	07/18/09 00:44
2-Nitrophenol		A	ND	1	10	µg, Total	1	07/18/09 00:44
3,3'-Dichlorobenzidine		A	ND	0.7	50	µg, Total	1	07/18/09 00:44
3-Nitroaniline		A	ND	1.3	50	µg, Total	1	07/18/09 00:44
3/4-Methylphenol		A	ND	0.8	10	µg, Total	1	07/18/09 00:44
4,6-Dinitro-2-methylphenol		A	ND	1.1	50	µg, Total	1	07/18/09 00:44
4-Bromophenyl phenyl ether		A	ND	0.9	10	µg, Total	1	07/18/09 00:44
4-Chloro-3-methylphenol		A	ND	1.2	20	µg, Total	1	07/18/09 00:44
4-Chloroaniline		A	ND	1	10	µg, Total	1	07/18/09 00:44
4-Chlorophenyl phenyl ether		A	ND	0.9	10	µg, Total	1	07/18/09 00:44
4-Nitroaniline		A	ND	1.7	50	µg, Total	1	07/18/09 00:44
4-Nitrophenol		A	ND	4.3	50	µg, Total	1	07/18/09 00:44
Bis(2-chloroethoxy)methane		A	ND	1	10	µg, Total	1	07/18/09 00:44
Bis(2-chloroethyl)ether		A	ND	0.9	10	µg, Total	1	07/18/09 00:44
Bis(2-chloroisopropyl)ether		A	ND	0.9	10	µg, Total	1	07/18/09 00:44
Bis(2-ethylhexyl)phthalate		A	ND	1.1	10	µg, Total	1	07/18/09 00:44
Butyl benzyl phthalate		A	ND	1	10	µg, Total	1	07/18/09 00:44
Carbazole		A	ND	1.2	10	µg, Total	1	07/18/09 00:44
Di-n-butyl phthalate		A	ND	1.2	10	µg, Total	1	07/18/09 00:44
Di-n-octyl phthalate		A	ND	1.1	10	µg, Total	1	07/18/09 00:44
Dibenzofuran		A	ND	0.8	10	µg, Total	1	07/18/09 00:44
Diethyl phthalate		A	ND	1.1	10	µg, Total	1	07/18/09 00:44
Dimethyl phthalate		A	ND	0.9	10	µg, Total	1	07/18/09 00:44
Hexachlorobenzene		A	ND	0.9	10	µg, Total	1	07/18/09 00:44

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**ANALYTICAL RESULTS**

Date: Monday, August 03, 2009

**Client:** MWH, Inc.  
**Client Project:** July 2009 - Monthly Air / ACS  
**Client Sample ID:** #8 TOX 2 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0907393-08B  
**Collection Date:** 07/09/09 11:08  
**Date Received:** 07/09/09 13:20

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method: TO-13MOD		Prep Date/Time: 07/16/09 13:01 Analyst: BEM					
Hexachlorobutadiene	A	ND	0.9	10		µg, Total	1	07/18/09 00:44
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	07/18/09 00:44
Hexachloroethane	A	ND	0.9	10		µg, Total	1	07/18/09 00:44
Isophorone	A	ND	1	10		µg, Total	1	07/18/09 00:44
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	07/18/09 00:44
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	07/18/09 00:44
Nitrobenzene	A	ND	1	10		µg, Total	1	07/18/09 00:44
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	07/18/09 00:44
Phenol	A	ND	0.4	10		µg, Total	1	07/18/09 00:44
Surr: 2,4,6-Tribromophenol	S	76.1	0	40.5-97		%REC	1	07/18/09 00:44
Surr: 2-Fluorobiphenyl	S	64.2	0	32.7-83.2		%REC	1	07/18/09 00:44
Surr: 2-Fluorophenol	S	68.0	0	20.5-87.9		%REC	1	07/18/09 00:44
Surr: Nitrobenzene-d5	S	79.8	0	33.7-77.1	S	%REC	1	07/18/09 00:44
Surr: Phenol-d5	S	82.4	0	32.7-80.9	S	%REC	1	07/18/09 00:44
Surr: Terphenyl-d14	S	64.9	0	22.7-96.5		%REC	1	07/18/09 00:44

PAHS BY GC/MS-SIM	Method: TO-13		Prep Date/Time: 07/16/09 13:01 Analyst: BEM					
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	07/18/09 00:44
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	07/18/09 00:44
Anthracene	A	ND	0.27	1.0		µg, Total	1	07/18/09 00:44
Benzo[a]anthracene	A	ND	0.47	1.0		µg, Total	1	07/18/09 00:44
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	07/18/09 00:44
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	07/18/09 00:44
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	07/18/09 00:44
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	07/18/09 00:44
Chrysene	A	ND	0.57	1.0		µg, Total	1	07/18/09 00:44
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	07/18/09 00:44
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	07/18/09 00:44
Fluorene	A	ND	0.25	1.0		µg, Total	1	07/18/09 00:44
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	07/18/09 00:44
Naphthalene	A	1.8	0.16	1.0		µg, Total	1	07/18/09 00:44
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	07/18/09 00:44
Pyrene	A	ND	0.44	1.0		µg, Total	1	07/18/09 00:44
Surr: Nitrobenzene-d5	S	79.8	0	33.7-77.1	S	%REC	1	07/18/09 00:44
Surr: 2-Fluorobiphenyl	S	64.2	0	32.7-83.2		%REC	1	07/18/09 00:44
Surr: Terphenyl-d14	S	64.9	0	22.7-96.5		%REC	1	07/18/09 00:44

10/10/09

**August 6, 2009 Off-Gas Sample Laboratory Results**

**ANALYTICAL RESULTS**

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #1 Offsite ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-01A  
**Collection Date:** 08/06/09 09:52  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method:	TO-15	Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	16000	450	1500	ppbv	,00	08/11/09 12:43	
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	08/11/09 15:37	
1,1,2-Trichloroethane	A	76	10	30	ppbv	60	08/11/09 15:37	
1,1-Dichloroethane	A	1000	42	150	ppbv	300	08/11/09 14:53	
1,1-Dichloroethene	A	51	10	30	ppbv	60	08/11/09 15:37	
1,2-Dichloroethane	A	330	10	30	ppbv	60	08/11/09 15:37	
1,2-Dichloropropane	A	92	8.4	30	ppbv	60	08/11/09 15:37	
2-Butanone	A	1000	36	600	ppbv	300	08/11/09 14:53	
2-Hexanone	A	ND	20	120	ppbv	60	08/11/09 15:37	
4-Methyl-2-Pentanone	A	820	14	30	ppbv	60	08/11/09 15:37	
Acetone	A	1200	170	600	ppbv	300	08/11/09 14:53	
Benzene	A	2200	36	150	ppbv	300	08/11/09 14:53	
Bromodichloromethane	A	ND	9	30	ppbv	60	08/11/09 15:37	
Bromoform	A	ND	10	30	ppbv	60	08/11/09 15:37	
Bromomethane	A	ND	11	30	ppbv	60	08/11/09 15:37	
Carbon disulfide	A	ND	11	30	ppbv	60	08/11/09 15:37	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	08/11/09 15:37	
Chlorobenzene	A	ND	9.6	30	ppbv	60	08/11/09 15:37	
Chloroethane	A	85	10	30	ppbv	60	08/11/09 15:37	
Chloroform	A	800	36	150	ppbv	300	08/11/09 14:53	
Chloromethane	A	ND	14	120	ppbv	60	08/11/09 15:37	
cis-1,2-Dichloroethene	A	710	42	150	ppbv	300	08/11/09 14:53	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	08/11/09 15:37	
Dibromochloromethane	A	ND	10	30	ppbv	60	08/11/09 15:37	
Ethyl benzene	A	2000	54	150	ppbv	300	08/11/09 14:53	
m,p-Xylene	A	8600	90	300	ppbv	300	08/11/09 14:53	
Methylene chloride	A	5000	42	600	ppbv	300	08/11/09 14:53	
o-Xylene	A	3700	51	150	ppbv	300	08/11/09 14:53	
Styrene	A	150	11	30	ppbv	60	08/11/09 15:37	
Tetrachloroethene	A	4500	51	150	ppbv	300	08/11/09 14:53	
Toluene	A	39000	540	1500	ppbv	,00	08/11/09 12:43	
trans-1,2-Dichloroethene	A	ND	19	30	ppbv	60	08/11/09 15:37	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	08/11/09 15:37	
Trichloroethene	A	4200	48	150	ppbv	300	08/11/09 14:53	
Vinyl chloride	A	100	9	30	ppbv	60	08/11/09 15:37	
Surr: 4-Bromofluorobenzene	S	115		77.7-127	%REC	60	08/11/09 15:37	

10/13/09

**ANALYTICAL RESULTS**

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #2 SBPA ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-02A  
**Collection Date:** 08/06/09 10:17  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS		Method: TO-15	Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	5300	45	150	ppbv	300	08/11/09 14:10	
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	08/11/09 16:20	
1,1,2-Trichloroethane	A	17	10	30	J	ppbv	60	08/11/09 16:20
1,1-Dichloroethane	A	790	42	150	ppbv	300	08/11/09 14:10	
1,1-Dichloroethene	A	55	10	30	ppbv	60	08/11/09 16:20	
1,2-Dichloroethane	A	110	10	30	ppbv	60	08/11/09 16:20	
1,2-Dichloropropane	A	95	8.4	30	ppbv	60	08/11/09 16:20	
2-Butanone	A	190	7.2	120	ppbv	60	08/11/09 16:20	
2-Hexanone	A	ND	20	120	ppbv	60	08/11/09 16:20	
4-Methyl-2-Pentanone	A	210	14	30	ppbv	60	08/11/09 16:20	
Acetone	A	380	34	120	ppbv	60	08/11/09 16:20	
Benzene	A	1100	7.2	30	ppbv	60	08/11/09 16:20	
Bromodichloromethane	A	ND	9	30	ppbv	60	08/11/09 16:20	
Bromoform	A	ND	10	30	ppbv	60	08/11/09 16:20	
Bromomethane	A	ND	11	30	ppbv	60	08/11/09 16:20	
Carbon disulfide	A	ND	11	30	ppbv	60	08/11/09 16:20	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	08/11/09 16:20	
Chlorobenzene	A	ND	9.6	30	ppbv	60	08/11/09 16:20	
Chloroethane	A	55	10	30	ppbv	60	08/11/09 16:20	
Chloroform	A	1300	36	150	ppbv	300	08/11/09 14:10	
Chloromethane	A	ND	14	120	ppbv	60	08/11/09 16:20	
cis-1,2-Dichloroethene	A	2900	42	150	ppbv	300	08/11/09 14:10	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	08/11/09 16:20	
Dibromochloromethane	A	ND	10	30	ppbv	60	08/11/09 16:20	
Ethyl benzene	A	1000	54	150	ppbv	300	08/11/09 14:10	
m,p-Xylene	A	3800	90	300	ppbv	300	08/11/09 14:10	
Methylene chloride	A	1200	42	600	ppbv	300	08/11/09 14:10	
o-Xylene	A	2000	51	150	ppbv	300	08/11/09 14:10	
Styrene	A	31	11	30	ppbv	60	08/11/09 16:20	
Tetrachloroethene	A	5300	51	150	ppbv	300	08/11/09 14:10	
Toluene	A	4200	54	150	ppbv	300	08/11/09 14:10	
trans-1,2-Dichloroethene	A	44	19	30	ppbv	60	08/11/09 16:20	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	08/11/09 16:20	
Trichloroethene	A	3900	48	150	ppbv	300	08/11/09 14:10	
Vinyl chloride	A	370	9	30	ppbv	60	08/11/09 16:20	
<i>Surr: 4-Bromofluorobenzene</i>	S	103		77.7-127	%REC	60	08/11/09 16:20	

8/10/13/09

**ANALYTICAL RESULTS**

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #3 TOX 1 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-03A  
**Collection Date:** 08/06/09 10:35  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method:	TO-15	Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	11000	88	290	ppbv	600	08/11/09 19:21	
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	08/11/09 20:06	
1,1,2-Trichloroethane	A	19	10	30	J	ppbv	60	08/11/09 20:06
1,1-Dichloroethane	A	1600	82	290	ppbv	600	08/11/09 19:21	
1,1-Dichloroethene	A	58	10	30	ppbv	60	08/11/09 20:06	
1,2-Dichloroethane	A	110	10	30	ppbv	60	08/11/09 20:06	
1,2-Dichloropropane	A	99	8.4	30	ppbv	60	08/11/09 20:06	
2-Butanone	A	170	7.2	120	ppbv	60	08/11/09 20:06	
2-Hexanone	A	ND	20	120	ppbv	60	08/11/09 20:06	
4-Methyl-2-Pentanone	A	170	14	30	ppbv	60	08/11/09 20:06	
Acetone	A	350	34	120	ppbv	60	08/11/09 20:06	
Benzene	A	1100	7.2	30	ppbv	60	08/11/09 20:06	
Bromodichloromethane	A	ND	9	30	ppbv	60	08/11/09 20:06	
Bromoform	A	ND	10	30	ppbv	60	08/11/09 20:06	
Bromomethane	A	ND	11	30	ppbv	60	08/11/09 20:06	
Carbon disulfide	A	ND	11	30	ppbv	60	08/11/09 20:06	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	08/11/09 20:06	
Chlorobenzene	A	120	9.6	30	ppbv	60	08/11/09 20:06	
Chloroethane	A	53	10	30	ppbv	60	08/11/09 20:06	
Chloroform	A	2600	71	290	ppbv	600	08/11/09 19:21	
Chloromethane	A	ND	14	120	ppbv	60	08/11/09 20:06	
cis-1,2-Dichloroethene	A	5800	82	290	ppbv	600	08/11/09 19:21	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	08/11/09 20:06	
Dibromochloromethane	A	ND	10	30	ppbv	60	08/11/09 20:06	
Ethyl benzene	A	2100	110	290	ppbv	600	08/11/09 19:21	
m,p-Xylene	A	7600	180	590	ppbv	600	08/11/09 19:21	
Methylene chloride	A	2200	82	1200	ppbv	600	08/11/09 19:21	
o-Xylene	A	3900	100	290	ppbv	600	08/11/09 19:21	
Styrene	A	29	11	30	J	ppbv	60	08/11/09 20:06
Tetrachloroethene	A	11000	100	290	ppbv	600	08/11/09 19:21	
Toluene	A	8200	110	290	ppbv	600	08/11/09 19:21	
trans-1,2-Dichloroethene	A	47	19	30	ppbv	60	08/11/09 20:06	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	08/11/09 20:06	
Trichloroethene	A	7800	94	290	ppbv	600	08/11/09 19:21	
Vinyl chloride	A	410	9	30	ppbv	60	08/11/09 20:06	
Surr: 4-Bromofluorobenzene	S	102		77.7-127	%REC	60	08/11/09 20:06	

F10/13/09

**ANALYTICAL RESULTS**

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #4 TOX 1 INFLUENT(DUP)  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-04A  
**Collection Date:** 08/06/09 11:00  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method: TO-15		Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	11000	88	290	ppbv	600	08/11/09 18:38	
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	08/11/09 20:50	
1,1,2-Trichloroethane	A	20	10	30	J	ppbv	60	08/11/09 20:50
1,1-Dichloroethane	A	1500	82	290	ppbv	600	08/11/09 18:38	
1,1-Dichloroethene	A	56	10	30	ppbv	60	08/11/09 20:50	
1,2-Dichloroethane	A	110	10	30	ppbv	60	08/11/09 20:50	
1,2-Dichloropropane	A	95	8.4	30	ppbv	60	08/11/09 20:50	
2-Butanone	A	200	7.2	120	ppbv	60	08/11/09 20:50	
2-Hexanone	A	ND	20	120	ppbv	60	08/11/09 20:50	
4-Methyl-2-Pentanone	A	190	14	30	ppbv	60	08/11/09 20:50	
Acetone	A	350	34	120	ppbv	60	08/11/09 20:50	
Benzene	A	1100	7.2	30	ppbv	60	08/11/09 20:50	
Bromodichloromethane	A	ND	9	30	ppbv	60	08/11/09 20:50	
Bromoform	A	ND	10	30	ppbv	60	08/11/09 20:50	
Bromomethane	A	ND	11	30	ppbv	60	08/11/09 20:50	
Carbon disulfide	A	ND	11	30	ppbv	60	08/11/09 20:50	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	08/11/09 20:50	
Chlorobenzene	A	ND	9.6	30	ppbv	60	08/11/09 20:50	
Chloroethane	A	52	10	30	ppbv	60	08/11/09 20:50	
Chloroform	A	2700	71	290	ppbv	600	08/11/09 18:38	
Chloromethane	A	ND	14	120	ppbv	60	08/11/09 20:50	
cis-1,2-Dichloroethene	A	5600	82	290	ppbv	600	08/11/09 18:38	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	08/11/09 20:50	
Dibromochloromethane	A	ND	10	30	ppbv	60	08/11/09 20:50	
Ethyl benzene	A	2100	110	290	ppbv	600	08/11/09 18:38	
m,p-Xylene	A	7800	180	590	ppbv	600	08/11/09 18:38	
Methylene chloride	A	2200	82	1200	ppbv	600	08/11/09 18:38	
o-Xylene	A	4100	100	290	ppbv	600	08/11/09 18:38	
Styrene	A	29	11	30	J	ppbv	60	08/11/09 20:50
Tetrachloroethene	A	11000	100	290	ppbv	600	08/11/09 18:38	
Toluene	A	8200	110	290	ppbv	600	08/11/09 18:38	
trans-1,2-Dichloroethene	A	47	19	30	ppbv	60	08/11/09 20:50	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	08/11/09 20:50	
Trichloroethene	A	7700	94	290	ppbv	600	08/11/09 18:38	
Vinyl chloride	A	390	9	30	ppbv	60	08/11/09 20:50	
Surr: 4-Bromofluorobenzene	S	103		77.7-127	%REC	60	08/11/09 20:50	

4/13/09

## ANALYTICAL RESULTS

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #5 TOX 1 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-05A  
**Collection Date:** 08/06/09 10:20  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS			Method: TO-15	Prep Date/Time:		Analyst: MAK		
1,1,1-Trichloroethane	A	11	0.15	0.50	ppbv	1	08/07/09 16:37	
1,1,2,2-Tetrachloroethane	A	ND	0.22	0.50	ppbv	1	08/07/09 16:37	
1,1,2-Trichloroethane	A	ND	0.17	0.50	ppbv	1	08/07/09 16:37	
1,1-Dichloroethane	A	2.8	0.14	0.50	ppbv	1	08/07/09 16:37	
1,1-Dichloroethene	A	44	1.7	4.9	ppbv	10	08/07/09 17:19	
1,2-Dichloroethane	A	0.46	0.17	0.50	J ppbv	1	08/07/09 16:37	
1,2-Dichloropropane	A	ND	0.14	0.50	ppbv	1	08/07/09 16:37	
2-Butanone	A	2.7	0.12	2.0	ppbv	1	08/07/09 16:37	
2-Hexanone	A	0.73	0.34	2.0	J ppbv	1	08/07/09 16:37	
4-Methyl-2-Pentanone	A	1.6	0.24	0.50	ppbv	1	08/07/09 16:37	
Acetone	A	13	0.56	2.0	ppbv	1	08/07/09 16:37	
Benzene	A	17	0.12	0.50	ppbv	1	08/07/09 16:37	
Bromodichloromethane	A	ND	0.15	0.50	ppbv	1	08/07/09 16:37	
Bromoform	A	ND	0.17	0.50	ppbv	1	08/07/09 16:37	
Bromomethane	A	ND	0.19	0.50	ppbv	1	08/07/09 16:37	
Carbon disulfide	A	ND	0.18	0.50	ppbv	1	08/07/09 16:37	
Carbon tetrachloride	A	ND	0.16	0.50	ppbv	1	08/07/09 16:37	
Chlorobenzene	A	0.43	0.16	0.50	J ppbv	1	08/07/09 16:37	
Chloroethane	A	ND	0.17	0.50	ppbv	1	08/07/09 16:37	
Chloroform	A	6.0	0.12	0.50	ppbv	1	08/07/09 16:37	
Chloromethane	A	1.7	0.23	2.0	J ppbv	1	08/07/09 16:37	
cis-1,2-Dichloroethene	A	14	0.14	0.50	ppbv	1	08/07/09 16:37	
cis-1,3-Dichloropropene	A	ND	0.14	0.50	ppbv	1	08/07/09 16:37	
Dibromochloromethane	A	ND	0.17	0.50	ppbv	1	08/07/09 16:37	
Ethyl benzene	A	2.8	0.18	0.50	ppbv	1	08/07/09 16:37	
m,p-Xylene	A	9.8	0.3	1.0	ppbv	1	08/07/09 16:37	
Methylene chloride	A	10	0.14	4.0	ppbv	1	08/07/09 16:37	
o-Xylene	A	4.4	0.17	0.50	ppbv	1	08/07/09 16:37	
Styrene	A	5.2	0.19	0.50	ppbv	1	08/07/09 16:37	
Tetrachloroethene	A	65	1.7	4.9	ppbv	10	08/07/09 17:19	
Toluene	A	25	1.8	4.9	ppbv	10	08/07/09 17:19	
trans-1,2-Dichloroethene	A	6.3	0.31	0.50	ppbv	1	08/07/09 16:37	
trans-1,3-Dichloropropene	A	ND	0.12	0.50	ppbv	1	08/07/09 16:37	
Trichloroethene	A	36	1.6	4.9	ppbv	10	08/07/09 17:19	
Vinyl chloride	A	8.3	0.15	0.50	ppbv	1	08/07/09 16:37	
Surr. 4-Bromofluorobenzene	S	93.4		77.7-127	%REC	1	08/07/09 16:37	

10/13/09

**ANALYTICAL RESULTS**

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #6 TOX 2 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air      **Work Order / ID:** ME0908264-06A  
**Collection Date:** 08/06/09 10:37  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method:	TO-15			Prep Date/Time:		Analyst:	MAK
1,1,1-Trichloroethane	A	11000	88	290	ppbv	600	08/11/09 23:43	
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	08/12/09 00:26	
1,1,2-Trichloroethane	A	67	10	30	ppbv	60	08/12/09 00:26	
1,1-Dichloroethane	A	1900	82	290	ppbv	600	08/11/09 23:43	
1,1-Dichloroethene	A	46	10	30	ppbv	60	08/12/09 00:26	
1,2-Dichloroethane	A	290	10	30	ppbv	60	08/12/09 00:26	
1,2-Dichloropropane	A	82	8.4	30	ppbv	60	08/12/09 00:26	
2-Butanone	A	1800	71	1200	ppbv	600	08/11/09 23:43	
2-Hexanone	A	ND	20	120	ppbv	60	08/12/09 00:26	
4-Methyl-2-Pentanone	A	1000	14	30	ppbv	60	08/12/09 00:26	
Acetone	A	2200	330	1200	ppbv	600	08/11/09 23:43	
Benzene	A	3800	71	290	ppbv	600	08/11/09 23:43	
Bromodichloromethane	A	ND	9	30	ppbv	60	08/12/09 00:26	
Bromoform	A	ND	10	30	ppbv	60	08/12/09 00:26	
Bromomethane	A	ND	11	30	ppbv	60	08/12/09 00:26	
Carbon disulfide	A	ND	11	30	ppbv	60	08/12/09 00:26	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	08/12/09 00:26	
Chlorobenzene	A	ND	9.6	30	ppbv	60	08/12/09 00:26	
Chloroethane	A	140	10	30	ppbv	60	08/12/09 00:26	
Chloroform	A	1200	7.2	30	ppbv	60	08/12/09 00:26	
Chloromethane	A	ND	14	120	ppbv	60	08/12/09 00:26	
cis-1,2-Dichloroethene	A	1600	82	290	ppbv	600	08/11/09 23:43	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	08/12/09 00:26	
Dibromochloromethane	A	ND	10	30	ppbv	60	08/12/09 00:26	
Ethyl benzene	A	3400	110	290	ppbv	600	08/11/09 23:43	
m,p-Xylene	A	15000	180	590	ppbv	600	08/11/09 23:43	
Methylene chloride	A	8700	82	1200	ppbv	600	08/11/09 23:43	
o-Xylene	A	6500	100	290	ppbv	600	08/11/09 23:43	
Styrene	A	140	11	30	ppbv	60	08/12/09 00:26	
Tetrachloroethene	A	7800	100	290	ppbv	600	08/11/09 23:43	
Toluene	A	26000	540	1500	ppbv	600	08/11/09 21:33	
trans-1,2-Dichloroethene	A	20	19	30	J	ppbv	60	08/12/09 00:26
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	08/12/09 00:26	
Trichloroethene	A	7400	94	290	ppbv	600	08/11/09 23:43	
Vinyl chloride	A	120	9	30	ppbv	60	08/12/09 00:26	
Surr: 4-Bromofluorobenzene	S	114		77.7-127	%REC	60	08/12/09 00:26	

10/13/09

**ANALYTICAL RESULTS**

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #7 TOX 2 INFLUENT (DUP)  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-07A  
**Collection Date:** 08/06/09 11:10  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method:	TO-15	Prep Date/Time:			Analyst:	MAK	
1,1,1-Trichloroethane	A	12000	90	300	ppbv	600	08/11/09 23:00	
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	08/12/09 01:08	
1,1,2-Trichloroethane	A	63	10	30	ppbv	60	08/12/09 01:08	
1,1-Dichloroethane	A	1900	84	300	ppbv	600	08/11/09 23:00	
1,1-Dichloroethene	A	43	10	30	ppbv	60	08/12/09 01:08	
1,2-Dichloroethane	A	280	10	30	ppbv	60	08/12/09 01:08	
1,2-Dichloropropane	A	82	8.4	30	ppbv	60	08/12/09 01:08	
2-Butanone	A	1900	72	1200	ppbv	600	08/11/09 23:00	
2-Hexanone	A	64	20	120	J	ppbv	60	08/12/09 01:08
4-Methyl-2-Pentanone	A	1000	14	30	ppbv	60	08/12/09 01:08	
Acetone	A	2200	340	1200	ppbv	600	08/11/09 23:00	
Benzene	A	3900	72	300	ppbv	600	08/11/09 23:00	
Bromodichloromethane	A	ND	9	30	ppbv	60	08/12/09 01:08	
Bromoform	A	ND	10	30	ppbv	60	08/12/09 01:08	
Bromomethane	A	ND	11	30	ppbv	60	08/12/09 01:08	
Carbon disulfide	A	ND	11	30	ppbv	60	08/12/09 01:08	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	08/12/09 01:08	
Chlorobenzene	A	220	9.6	30	ppbv	60	08/12/09 01:08	
Chloroethane	A	120	10	30	ppbv	60	08/12/09 01:08	
Chloroform	A	1100	7.2	30	ppbv	60	08/12/09 01:08	
Chloromethane	A	ND	14	120	ppbv	60	08/12/09 01:08	
cis-1,2-Dichloroethene	A	1600	84	300	ppbv	600	08/11/09 23:00	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	08/12/09 01:08	
Dibromochloromethane	A	ND	10	30	ppbv	60	08/12/09 01:08	
Ethyl benzene	A	3500	110	300	ppbv	600	08/11/09 23:00	
m,p-Xylene	A	15000	180	600	ppbv	600	08/11/09 23:00	
Methylene chloride	A	8800	84	1200	ppbv	600	08/11/09 23:00	
o-Xylene	A	6600	100	300	ppbv	600	08/11/09 23:00	
Styrene	A	140	11	30	ppbv	60	08/12/09 01:08	
Tetrachloroethene	A	8000	100	300	ppbv	600	08/11/09 23:00	
Toluene	A	24000	540	1500	ppbv	3,00	08/11/09 22:16	
trans-1,2-Dichloroethene	A	ND	19	30	ppbv	60	08/12/09 01:08	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	08/12/09 01:08	
Trichloroethene	A	7500	96	300	ppbv	600	08/11/09 23:00	
Vinyl chloride	A	110	9	30	ppbv	60	08/12/09 01:08	
Surr: 4-Bromofluorobenzene	S	110		77.7-127	%REC	60	08/12/09 01:08	

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10/13/09

**ANALYTICAL RESULTS**

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #8 TOX 2 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-08A  
**Collection Date:** 08/06/09 09:50  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method:	TO-15	Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	330	6.8	23	ppbv	50	08/07/09 20:16	
1,1,2,2-Tetrachloroethane	A	0.74	0.22	0.50	ppbv	1	08/07/09 18:48	
1,1,2-Trichloroethane	A	3.5	0.17	0.50	ppbv	1	08/07/09 18:48	
1,1-Dichloroethane	A	61	1.4	4.9	ppbv	10	08/07/09 19:32	
1,1-Dichloroethene	A	130	1.7	4.9	ppbv	10	08/07/09 19:32	
1,2-Dichloroethane	A	11	0.17	0.50	ppbv	1	08/07/09 18:48	
1,2-Dichloropropane	A	2.8	0.14	0.50	ppbv	1	08/07/09 18:48	
2-Butanone	A	42	5.5	91	J	ppbv	50	08/07/09 20:16
2-Hexanone	A	1.3	0.34	2.0	J	ppbv	1	08/07/09 18:48
4-Methyl-2-Pentanone	A	15	0.24	0.50	ppbv	1	08/07/09 18:48	
Acetone	A	ND	5.5	20	ppbv	10	08/07/09 19:32	
Benzene	A	220	5.5	23	ppbv	50	08/07/09 20:16	
Bromodichloromethane	A	ND	0.15	0.50	ppbv	1	08/07/09 18:48	
Bromoform	A	ND	0.17	0.50	ppbv	1	08/07/09 18:48	
Bromomethane	A	ND	0.19	0.50	ppbv	1	08/07/09 18:48	
Carbon disulfide	A	ND	0.18	0.50	ppbv	1	08/07/09 18:48	
Carbon tetrachloride	A	0.54	0.16	0.50	ppbv	1	08/07/09 18:48	
Chlorobenzene	A	2.9	0.16	0.50	ppbv	1	08/07/09 18:48	
Chloroethane	A	6.3	0.17	0.50	ppbv	1	08/07/09 18:48	
Chloroform	A	50	1.2	4.9	ppbv	10	08/07/09 19:32	
Chloromethane	A	6.2	0.23	2.0	ppbv	1	08/07/09 18:48	
cis-1,2-Dichloroethene	A	61	1.4	4.9	ppbv	10	08/07/09 19:32	
cis-1,3-Dichloropropene	A	ND	0.14	0.50	ppbv	1	08/07/09 18:48	
Dibromochloromethane	A	ND	0.17	0.50	ppbv	1	08/07/09 18:48	
Ethyl benzene	A	78	1.8	4.9	ppbv	10	08/07/09 19:32	
m,p-Xylene	A	290	2.9	9.8	ppbv	10	08/07/09 19:32	
Methylene chloride	A	320	6.4	180	ppbv	50	08/07/09 20:16	
o-Xylene	A	120	1.7	4.9	ppbv	10	08/07/09 19:32	
Styrene	A	50	1.9	4.9	ppbv	10	08/07/09 19:32	
Tetrachloroethene	A	320	7.7	23	ppbv	50	08/07/09 20:16	
Toluene	A	690	8.2	23	ppbv	50	08/07/09 20:16	
trans-1,2-Dichloroethene	A	8.9	0.31	0.50	ppbv	1	08/07/09 18:48	
trans-1,3-Dichloropropene	A	ND	0.12	0.50	ppbv	1	08/07/09 18:48	
Trichloroethene	A	260	7.3	23	ppbv	50	08/07/09 20:16	
Vinyl chloride	A	26	1.5	4.9	ppbv	10	08/07/09 19:32	
Surr: 4-Bromofluorobenzene	S	100		77.7-127	%REC	1	08/07/09 18:48	

8/10/2009

**ANALYTICAL RESULTS**

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #1 Offsite ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-01B  
**Collection Date:** 08/06/09 09:52  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method: TO-13MOD Prep Date/Time: 08/13/09 12:32 Analyst: BEM							
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	08/14/09 21:01
1,2-Dichlorobenzene	A	ND	0.7	10		µg, Total	1	08/14/09 21:01
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	08/14/09 21:01
1,4-Dichlorobenzene	A	ND	0.9	10		µg, Total	1	08/14/09 21:01
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	08/14/09 21:01
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	08/14/09 21:01
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	08/14/09 21:01
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	08/14/09 21:01
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	08/14/09 21:01
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	08/14/09 21:01
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	08/14/09 21:01
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	08/14/09 21:01
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	08/14/09 21:01
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	08/14/09 21:01
2-Methylphenol	A	ND	0.7	10		µg, Total	1	08/14/09 21:01
2-Nitroaniline	A	ND	1	50		µg, Total	1	08/14/09 21:01
2-Nitrophenol	A	ND	1	10		µg, Total	1	08/14/09 21:01
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	08/14/09 21:01
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	08/14/09 21:01
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	08/14/09 21:01
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	08/14/09 21:01
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	08/14/09 21:01
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	08/14/09 21:01
4-Chloroaniline	A	ND	1	10		µg, Total	1	08/14/09 21:01
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	08/14/09 21:01
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	08/14/09 21:01
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	08/14/09 21:01
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	08/14/09 21:01
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	08/14/09 21:01
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	08/14/09 21:01
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10		µg, Total	1	08/14/09 21:01
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	08/14/09 21:01
Carbazole	A	ND	1.2	10		µg, Total	1	08/14/09 21:01
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	08/14/09 21:01
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	08/14/09 21:01
Dibenzofuran	A	ND	0.8	10		µg, Total	1	08/14/09 21:01
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	08/14/09 21:01
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	08/14/09 21:01
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	08/14/09 21:01

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8/13/09

## ANALYTICAL RESULTS

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #1 Offsite ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-01B  
**Collection Date:** 08/06/09 09:52  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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<b>SEMI-VOLATILE ORGANIC ANALYTE</b>		Method: TO-13MOD Prep Date/Time: 08/13/09 12:32 Analyst: BEM						
Hexachlorobutadiene	A	ND	0.9	10		µg, Total	1	08/14/09 21:01
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	08/14/09 21:01
Hexachloroethane	A	ND	0.9	10		µg, Total	1	08/14/09 21:01
Isophorone	A	ND	1	10		µg, Total	1	08/14/09 21:01
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	08/14/09 21:01
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	08/14/09 21:01
Nitrobenzene	A	ND	1	10		µg, Total	1	08/14/09 21:01
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	08/14/09 21:01
Phenol	A	ND	0.4	10		µg, Total	1	08/14/09 21:01
<i>Surr: 2,4,6-Tribromophenol</i>	S	55.2		40.5-97		%REC	1	08/14/09 21:01
<i>Surr: 2-Fluorobiphenyl</i>	S	32.2		32.7-83.2	S	%REC	1	08/14/09 21:01
<i>Surr: 2-Fluorophenol</i>	S	24.4		20.5-87.9		%REC	1	08/14/09 21:01
<i>Surr: Nitrobenzene-d5</i>	S	24.3		33.7-77.1	S	%REC	1	08/14/09 21:01
<i>Surr: Phenol-d5</i>	S	27.8		32.7-80.9	S	%REC	1	08/14/09 21:01
<i>Surr: Terphenyl-d14</i>	S	46.6		22.7-96.5		%REC	1	08/14/09 21:01

<b>PAHS BY GC/MS-SIM</b>		Method: TO-13 Prep Date/Time: 08/13/09 12:32 Analyst: BEM						
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	08/14/09 21:01
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	08/14/09 21:01
Anthracene	A	ND	0.27	1.0		µg, Total	1	08/14/09 21:01
Benzo[a]anthracene	A	ND	0.47	1.0		µg, Total	1	08/14/09 21:01
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	08/14/09 21:01
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	08/14/09 21:01
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	08/14/09 21:01
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	08/14/09 21:01
Chrysene	A	ND	0.57	1.0		µg, Total	1	08/14/09 21:01
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	08/14/09 21:01
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	08/14/09 21:01
Fluorene	A	ND	0.25	1.0		µg, Total	1	08/14/09 21:01
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	08/14/09 21:01
Naphthalene	A	1.7	0.16	1.0		µg, Total	1	08/14/09 21:01
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	08/14/09 21:01
Pyrene	A	ND	0.44	1.0		µg, Total	1	08/14/09 21:01
<i>Surr: Nitrobenzene-d5</i>	S	24.3		33.7-77.1	S	%REC	1	08/14/09 21:01
<i>Surr: 2-Fluorobiphenyl</i>	S	32.2		32.7-83.2	S	%REC	1	08/14/09 21:01
<i>Surr: Terphenyl-d14</i>	S	46.6		22.7-96.5		%REC	1	08/14/09 21:01

M 10/17/09

## ANALYTICAL RESULTS

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #2 SBPA ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-02B  
**Collection Date:** 08/06/09 10:17  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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<b>SEMI-VOLATILE ORGANIC ANALYTE</b>		Method: TO-13MOD	Prep Date/Time: 08/13/09 12:32 Analyst: BEM					
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	08/14/09 21:23
1,2-Dichlorobenzene	A	5.7	0.7	10	J	µg, Total	1	08/14/09 21:23
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	08/14/09 21:23
1,4-Dichlorobenzene	A	1.6	0.9	10	J	µg, Total	1	08/14/09 21:23
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	08/14/09 21:23
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	08/14/09 21:23
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	08/14/09 21:23
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	08/14/09 21:23
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	08/14/09 21:23
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	08/14/09 21:23
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	08/14/09 21:23
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	08/14/09 21:23
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	08/14/09 21:23
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	08/14/09 21:23
2-Methylphenol	A	ND	0.7	10		µg, Total	1	08/14/09 21:23
2-Nitroaniline	A	ND	1	50		µg, Total	1	08/14/09 21:23
2-Nitrophenol	A	ND	1	10		µg, Total	1	08/14/09 21:23
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	08/14/09 21:23
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	08/14/09 21:23
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	08/14/09 21:23
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	08/14/09 21:23
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	08/14/09 21:23
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	08/14/09 21:23
4-Chloroaniline	A	ND	1	10		µg, Total	1	08/14/09 21:23
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	08/14/09 21:23
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	08/14/09 21:23
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	08/14/09 21:23
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	08/14/09 21:23
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	08/14/09 21:23
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	08/14/09 21:23
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10		µg, Total	1	08/14/09 21:23
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	08/14/09 21:23
Carbazole	A	ND	1.2	10		µg, Total	1	08/14/09 21:23
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	08/14/09 21:23
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	08/14/09 21:23
Dibenzofuran	A	ND	0.8	10		µg, Total	1	08/14/09 21:23
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	08/14/09 21:23
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	08/14/09 21:23
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	08/14/09 21:23

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**ANALYTICAL RESULTS**

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #2 SBPA ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-02B  
**Collection Date:** 08/06/09 10:17  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD						
		Prep Date/Time: 08/13/09 12:32 Analyst: BEM						
Hexachlorobutadiene	A	0.98	0.9	10	J	µg, Total	1	08/14/09 21:23
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	08/14/09 21:23
Hexachloroethane	A	ND	0.9	10		µg, Total	1	08/14/09 21:23
Isophorone	A	ND	1	10		µg, Total	1	08/14/09 21:23
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	08/14/09 21:23
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	08/14/09 21:23
Nitrobenzene	A	ND	1	10		µg, Total	1	08/14/09 21:23
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	08/14/09 21:23
Phenol	A	ND	0.4	10		µg, Total	1	08/14/09 21:23
Surr: 2,4,6-Tribromophenol	S	58.8		40.5-97		%REC	1	08/14/09 21:23
Surr: 2-Fluorobiphenyl	S	46.0		32.7-83.2		%REC	1	08/14/09 21:23
Surr: 2-Fluorophenol	S	36.8		20.5-87.9		%REC	1	08/14/09 21:23
Surr: Nitrobenzene-d5	S	37.1		33.7-77.1		%REC	1	08/14/09 21:23
Surr: Phenol-d5	S	37.0		32.7-80.9		%REC	1	08/14/09 21:23
Surr: Terphenyl-d14	S	48.9		22.7-96.5		%REC	1	08/14/09 21:23

PAHS BY GC/MS-SIM		Method: TO-13						
		Prep Date/Time: 08/13/09 12:32 Analyst: BEM						
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	08/14/09 21:23
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	08/14/09 21:23
Anthracene	A	ND	0.27	1.0		µg, Total	1	08/14/09 21:23
Benzo[a]anthracene	A	ND	0.47	1.0		µg, Total	1	08/14/09 21:23
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	08/14/09 21:23
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	08/14/09 21:23
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	08/14/09 21:23
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	08/14/09 21:23
Chrysene	A	ND	0.57	1.0		µg, Total	1	08/14/09 21:23
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	08/14/09 21:23
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	08/14/09 21:23
Fluorene	A	ND	0.25	1.0		µg, Total	1	08/14/09 21:23
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	08/14/09 21:23
Naphthalene	A	1.3	0.16	1.0		µg, Total	1	08/14/09 21:23
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	08/14/09 21:23
Pyrene	A	ND	0.44	1.0		µg, Total	1	08/14/09 21:23
Surr: Nitrobenzene-d5	S	37.1		33.7-77.1		%REC	1	08/14/09 21:23
Surr: 2-Fluorobiphenyl	S	46.0		32.7-83.2		%REC	1	08/14/09 21:23
Surr: Terphenyl-d14	S	48.9		22.7-96.5		%REC	1	08/14/09 21:23

## ANALYTICAL RESULTS

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #3 TOX 1 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-03B  
**Collection Date:** 08/06/09 10:35  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE Method: TO-13MOD		Prep Date/Time: 08/13/09 12:32 Analyst: BEM						
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	08/14/09 21:44
1,2-Dichlorobenzene	A	1.6	0.7	10	J	µg, Total	1	08/14/09 21:44
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	08/14/09 21:44
1,4-Dichlorobenzene	A	ND	0.9	10		µg, Total	1	08/14/09 21:44
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	08/14/09 21:44
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	08/14/09 21:44
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	08/14/09 21:44
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	08/14/09 21:44
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	08/14/09 21:44
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	08/14/09 21:44
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	08/14/09 21:44
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	08/14/09 21:44
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	08/14/09 21:44
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	08/14/09 21:44
2-Methylphenol	A	ND	0.7	10		µg, Total	1	08/14/09 21:44
2-Nitroaniline	A	ND	1	50		µg, Total	1	08/14/09 21:44
2-Nitrophenol	A	ND	1	10		µg, Total	1	08/14/09 21:44
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	08/14/09 21:44
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	08/14/09 21:44
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	08/14/09 21:44
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	08/14/09 21:44
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	08/14/09 21:44
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	08/14/09 21:44
4-Chloroaniline	A	ND	1	10		µg, Total	1	08/14/09 21:44
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	08/14/09 21:44
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	08/14/09 21:44
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	08/14/09 21:44
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	08/14/09 21:44
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	08/14/09 21:44
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	08/14/09 21:44
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10		µg, Total	1	08/14/09 21:44
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	08/14/09 21:44
Carbazole	A	ND	1.2	10		µg, Total	1	08/14/09 21:44
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	08/14/09 21:44
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	08/14/09 21:44
Dibenzofuran	A	ND	0.8	10		µg, Total	1	08/14/09 21:44
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	08/14/09 21:44
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	08/14/09 21:44
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	08/14/09 21:44

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## ANALYTICAL RESULTS

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #3 TOX 1 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-03B  
**Collection Date:** 08/06/09 10:35  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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**SEMI-VOLATILE ORGANIC ANALYTE** Method: TO-13MOD Prep Date/Time: 08/13/09 12:32 Analyst: BEM

Hexachlorobutadiene	A	ND	0.9	10		µg, Total	1	08/14/09 21:44
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	08/14/09 21:44
Hexachloroethane	A	ND	0.9	10		µg, Total	1	08/14/09 21:44
Isophorone	A	ND	1	10		µg, Total	1	08/14/09 21:44
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	08/14/09 21:44
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	08/14/09 21:44
Nitrobenzene	A	ND	1	10		µg, Total	1	08/14/09 21:44
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	08/14/09 21:44
Phenol	A	ND	0.4	10		µg, Total	1	08/14/09 21:44
Surr: 2,4,6-Tribromophenol	S	48.5		40.5-97		%REC	1	08/14/09 21:44
Surr: 2-Fluorobiphenyl	S	34.9		32.7-83.2		%REC	1	08/14/09 21:44
Surr: 2-Fluorophenol	S	26.3		20.5-87.9		%REC	1	08/14/09 21:44
Surr: Nitrobenzene-d5	S	26.9		33.7-77.1	S	%REC	1	08/14/09 21:44
Surr: Phenol-d5	S	28.0		32.7-80.9	S	%REC	1	08/14/09 21:44
Surr: Terphenyl-d14	S	42.6		22.7-96.5		%REC	1	08/14/09 21:44

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**PAHS BY GC/MS-SIM** Method: TO-13 Prep Date/Time: 08/13/09 12:32 Analyst: BEM

Acenaphthene	A	ND	0.21	1.0		µg, Total	1	08/14/09 21:44
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	08/14/09 21:44
Anthracene	A	ND	0.27	1.0		µg, Total	1	08/14/09 21:44
Benz[a]anthracene	A	ND	0.47	1.0		µg, Total	1	08/14/09 21:44
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	08/14/09 21:44
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	08/14/09 21:44
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	08/14/09 21:44
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	08/14/09 21:44
Chrysene	A	ND	0.57	1.0		µg, Total	1	08/14/09 21:44
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	08/14/09 21:44
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	08/14/09 21:44
Fluorene	A	ND	0.25	1.0		µg, Total	1	08/14/09 21:44
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	08/14/09 21:44
Naphthalene	A	ND	0.16	1.0		µg, Total	1	08/14/09 21:44
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	08/14/09 21:44
Pyrene	A	ND	0.44	1.0		µg, Total	1	08/14/09 21:44
Surr: Nitrobenzene-d5	S	26.9		33.7-77.1	S	%REC	1	08/14/09 21:44
Surr: 2-Fluorobiphenyl	S	34.9		32.7-83.2		%REC	1	08/14/09 21:44
Surr: Terphenyl-d14	S	42.6		22.7-96.5		%REC	1	08/14/09 21:44

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## ANALYTICAL RESULTS

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #4 TOX 1 INFLUENT(DUP)  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-04B  
**Collection Date:** 08/06/09 11:00  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD						
					Prep Date/Time: 08/13/09 12:32		Analyst: BEM	
1,2,4-Trichlorobenzene	A	ND	0.9	10	μg, Total	1	08/14/09 22:06	UJ
1,2-Dichlorobenzene	A	1.7	0.7	10	J μg, Total	1	08/14/09 22:06	
1,3-Dichlorobenzene	A	ND	0.8	10	μg, Total	1	08/14/09 22:06	
1,4-Dichlorobenzene	A	ND	0.9	10	μg, Total	1	08/14/09 22:06	
2,4,5-Trichlorophenol	A	ND	1.5	10	μg, Total	1	08/14/09 22:06	
2,4,6-Trichlorophenol	A	ND	0.9	10	μg, Total	1	08/14/09 22:06	
2,4-Dichlorophenol	A	ND	0.7	10	μg, Total	1	08/14/09 22:06	
2,4-Dimethylphenol	A	ND	0.8	10	μg, Total	1	08/14/09 22:06	
2,4-Dinitrophenol	A	ND	9.4	50	μg, Total	1	08/14/09 22:06	
2,4-Dinitrotoluene	A	ND	0.8	10	μg, Total	1	08/14/09 22:06	
2,6-Dinitrotoluene	A	ND	1.1	10	μg, Total	1	08/14/09 22:06	
2-Chloronaphthalene	A	ND	0.9	10	μg, Total	1	08/14/09 22:06	
2-Chlorophenol	A	ND	0.7	10	μg, Total	1	08/14/09 22:06	
2-Methylnaphthalene	A	ND	0.9	10	μg, Total	1	08/14/09 22:06	
2-Methylphenol	A	ND	0.7	10	μg, Total	1	08/14/09 22:06	
2-Nitroaniline	A	ND	1	50	μg, Total	1	08/14/09 22:06	
2-Nitrophenol	A	ND	1	10	μg, Total	1	08/14/09 22:06	
3,3'-Dichlorobenzidine	A	ND	0.7	50	μg, Total	1	08/14/09 22:06	
3-Nitroaniline	A	ND	1.3	50	μg, Total	1	08/14/09 22:06	
3/4-Methylphenol	A	ND	0.8	10	μg, Total	1	08/14/09 22:06	
4,6-Dinitro-2-methylphenol	A	ND	1.1	50	μg, Total	1	08/14/09 22:06	
4-Bromophenyl phenyl ether	A	ND	0.9	10	μg, Total	1	08/14/09 22:06	
4-Chloro-3-methylphenol	A	ND	1.2	20	μg, Total	1	08/14/09 22:06	
4-Chloroaniline	A	ND	1	10	μg, Total	1	08/14/09 22:06	
4-Chlorophenyl phenyl ether	A	ND	0.9	10	μg, Total	1	08/14/09 22:06	
4-Nitroaniline	A	ND	1.7	50	μg, Total	1	08/14/09 22:06	
4-Nitrophenol	A	ND	4.3	50	μg, Total	1	08/14/09 22:06	
Bis(2-chloroethoxy)methane	A	ND	1	10	μg, Total	1	08/14/09 22:06	
Bis(2-chloroethyl)ether	A	ND	0.9	10	μg, Total	1	08/14/09 22:06	
Bis(2-chloroisopropyl)ether	A	ND	0.9	10	μg, Total	1	08/14/09 22:06	
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10	μg, Total	1	08/14/09 22:06	
Butyl benzyl phthalate	A	ND	1	10	μg, Total	1	08/14/09 22:06	
Carbazole	A	ND	1.2	10	μg, Total	1	08/14/09 22:06	
Di-n-butyl phthalate	A	ND	1.2	10	μg, Total	1	08/14/09 22:06	
Di-n-octyl phthalate	A	ND	1.1	10	μg, Total	1	08/14/09 22:06	
Dibenzofuran	A	ND	0.8	10	μg, Total	1	08/14/09 22:06	
Diethyl phthalate	A	ND	1.1	10	μg, Total	1	08/14/09 22:06	
Dimethyl phthalate	A	ND	0.9	10	μg, Total	1	08/14/09 22:06	
Hexachlorobenzene	A	ND	0.9	10	μg, Total	1	08/14/09 22:06	

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10/13/09

## ANALYTICAL RESULTS

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #4 TOX 1 INFLUENT(DUP)  
**Sample Description:**  
**Sample Matrix:** Air      **Work Order / ID:** ME0908264-04B  
**Collection Date:** 08/06/09 11:00  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD						
		Prep Date/Time: 08/13/09 12:32 Analyst: BEM						
Hexachlorobutadiene	A	ND	0.9	10		µg, Total	1	08/14/09 22:06
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	08/14/09 22:06
Hexachloroethane	A	ND	0.9	10		µg, Total	1	08/14/09 22:06
Isophorone	A	ND	1	10		µg, Total	1	08/14/09 22:06
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	08/14/09 22:06
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	08/14/09 22:06
Nitrobenzene	A	ND	1	10		µg, Total	1	08/14/09 22:06
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	08/14/09 22:06
Phenol	A	ND	0.4	10		µg, Total	1	08/14/09 22:06
Surr: 2,4,6-Tribromophenol	S	44.7		40.5-97		%REC	1	08/14/09 22:06
Surr: 2-Fluorobiphenyl	S	34.9		32.7-83.2		%REC	1	08/14/09 22:06
Surr: 2-Fluorophenol	S	26.6		20.5-87.9		%REC	1	08/14/09 22:06
Surr: Nitrobenzene-d5	S	27.8		33.7-77.1	S	%REC	1	08/14/09 22:06
Surr: Phenol-d5	S	26.8		32.7-80.9	S	%REC	1	08/14/09 22:06
Surr: Terphenyl-d14	S	40.1		22.7-96.5		%REC	1	08/14/09 22:06

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PAHS BY GC/MS-SIM		Method: TO-13						
		Prep Date/Time: 08/13/09 12:32 Analyst: BEM						
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	08/14/09 22:06
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	08/14/09 22:06
Anthracene	A	ND	0.27	1.0		µg, Total	1	08/14/09 22:06
Benzo[a]anthracene	A	ND	0.47	1.0		µg, Total	1	08/14/09 22:06
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	08/14/09 22:06
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	08/14/09 22:06
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	08/14/09 22:06
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	08/14/09 22:06
Chrysene	A	ND	0.57	1.0		µg, Total	1	08/14/09 22:06
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	08/14/09 22:06
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	08/14/09 22:06
Fluorene	A	ND	0.25	1.0		µg, Total	1	08/14/09 22:06
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	08/14/09 22:06
Naphthalene	A	ND	0.16	1.0		µg, Total	1	08/14/09 22:06
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	08/14/09 22:06
Pyrene	A	ND	0.44	1.0		µg, Total	1	08/14/09 22:06
Surr: Nitrobenzene-d5	S	27.8		33.7-77.1	S	%REC	1	08/14/09 22:06
Surr: 2-Fluorobiphenyl	S	34.9		32.7-83.2		%REC	1	08/14/09 22:06
Surr: Terphenyl-d14	S	40.1		22.7-96.5		%REC	1	08/14/09 22:06

**ANALYTICAL RESULTS**

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #5 TOX 1 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-05B  
**Collection Date:** 08/06/09 10:20  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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**SEMI-VOLATILE ORGANIC ANALYTE** Method: TO-13MOD Prep Date/Time: 08/13/09 12:32 Analyst: BEM

UJ  
↓UJ  
UJUJ  
↓  
UJ

UJ

UJ  
↓UJ  
UJ  
UJ

1,2,4-Trichlorobenzene	A	ND	0.9	10	ug, Total	1	08/14/09 22:29
1,2-Dichlorobenzene	A	ND	0.7	10	ug, Total	1	08/14/09 22:29
1,3-Dichlorobenzene	A	ND	0.8	10	ug, Total	1	08/14/09 22:29
1,4-Dichlorobenzene	A	ND	0.9	10	ug, Total	1	08/14/09 22:29
2,4,5-Trichlorophenol	A	ND	1.5	10	ug, Total	1	08/14/09 22:29
2,4,6-Trichlorophenol	A	ND	0.9	10	ug, Total	1	08/14/09 22:29
2,4-Dichlorophenol	A	ND	0.7	10	ug, Total	1	08/14/09 22:29
2,4-Dimethylphenol	A	ND	0.8	10	ug, Total	1	08/14/09 22:29
2,4-Dinitrophenol	A	ND	9.4	50	ug, Total	1	08/14/09 22:29
2,4-Dinitrotoluene	A	ND	0.8	10	ug, Total	1	08/14/09 22:29
2,6-Dinitrotoluene	A	ND	1.1	10	ug, Total	1	08/14/09 22:29
2-Chloronaphthalene	A	ND	0.9	10	ug, Total	1	08/14/09 22:29
2-Chlorophenol	A	ND	0.7	10	ug, Total	1	08/14/09 22:29
2-Methylnaphthalene	A	ND	0.9	10	ug, Total	1	08/14/09 22:29
2-Methylphenol	A	ND	0.7	10	ug, Total	1	08/14/09 22:29
2-Nitroaniline	A	ND	1	50	ug, Total	1	08/14/09 22:29
2-Nitrophenol	A	ND	1	10	ug, Total	1	08/14/09 22:29
3,3'-Dichlorobenzidine	A	ND	0.7	50	ug, Total	1	08/14/09 22:29
3-Nitroaniline	A	ND	1.3	50	ug, Total	1	08/14/09 22:29
3/4-Methylphenol	A	ND	0.8	10	ug, Total	1	08/14/09 22:29
4,6-Dinitro-2-methylphenol	A	ND	1.1	50	ug, Total	1	08/14/09 22:29
4-Bromophenyl phenyl ether	A	ND	0.9	10	ug, Total	1	08/14/09 22:29
4-Chloro-3-methylphenol	A	ND	1.2	20	ug, Total	1	08/14/09 22:29
4-Chloroaniline	A	ND	1	10	ug, Total	1	08/14/09 22:29
4-Chlorophenyl phenyl ether	A	ND	0.9	10	ug, Total	1	08/14/09 22:29
4-Nitroaniline	A	ND	1.7	50	ug, Total	1	08/14/09 22:29
4-Nitrophenol	A	ND	4.3	50	ug, Total	1	08/14/09 22:29
Bis(2-chloroethoxy)methane	A	ND	1	10	ug, Total	1	08/14/09 22:29
Bis(2-chloroethyl)ether	A	ND	0.9	10	ug, Total	1	08/14/09 22:29
Bis(2-chloroisopropyl)ether	A	ND	0.9	10	ug, Total	1	08/14/09 22:29
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10	ug, Total	1	08/14/09 22:29
Butyl benzyl phthalate	A	ND	1	10	ug, Total	1	08/14/09 22:29
Carbazole	A	ND	1.2	10	ug, Total	1	08/14/09 22:29
Di-n-butyl phthalate	A	ND	1.2	10	ug, Total	1	08/14/09 22:29
Di-n-octyl phthalate	A	ND	1.1	10	ug, Total	1	08/14/09 22:29
Dibenzofuran	A	ND	0.8	10	ug, Total	1	08/14/09 22:29
Diethyl phthalate	A	ND	1.1	10	ug, Total	1	08/14/09 22:29
Dimethyl phthalate	A	ND	0.9	10	ug, Total	1	08/14/09 22:29
Hexachlorobenzene	A	ND	0.9	10	ug, Total	1	08/14/09 22:29

8/16/13 log

## ANALYTICAL RESULTS

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #5 TOX 1 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-05B  
**Collection Date:** 08/06/09 10:20  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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**SEMI-VOLATILE ORGANIC ANALYTE** Method: TO-13MOD Prep Date/Time: 08/13/09 12:32 Analyst: BEM

UJ  
UJ  
↓  
UJ  
UJ

Hexachlorobutadiene	A	ND	0.9	10	µg, Total	1	08/14/09 22:29
Hexachlorocyclopentadiene	A	ND	0.6	10	µg, Total	1	08/14/09 22:29
Hexachloroethane	A	ND	0.9	10	µg, Total	1	08/14/09 22:29
Isophorone	A	ND	1	10	µg, Total	1	08/14/09 22:29
N-Nitrosodi-n-propylamine	A	ND	1	10	µg, Total	1	08/14/09 22:29
N-Nitrosodiphenylamine	A	ND	0.7	10	µg, Total	1	08/14/09 22:29
Nitrobenzene	A	ND	1	10	µg, Total	1	08/14/09 22:29
Pentachlorophenol	A	ND	1.3	50	µg, Total	1	08/14/09 22:29
Phenol	A	ND	0.4	10	µg, Total	1	08/14/09 22:29
<i>Surr: 2,4,6-Tribromophenol</i>	S	66.8		40.5-97	%REC	1	08/14/09 22:29
<i>Surr: 2-Fluorobiphenyl</i>	S	51.1		32.7-83.2	%REC	1	08/14/09 22:29
<i>Surr: 2-Fluorophenol</i>	S	42.8		20.5-87.9	%REC	1	08/14/09 22:29
<i>Surr: Nitrobenzene-d5</i>	S	40.9		33.7-77.1	%REC	1	08/14/09 22:29
<i>Surr: Phenol-d5</i>	S	39.6		32.7-80.9	%REC	1	08/14/09 22:29
<i>Surr: Terphenyl-d14</i>	S	51.3		22.7-96.5	%REC	1	08/14/09 22:29

**PAHS BY GC/MS-SIM** Method: TO-13 Prep Date/Time: 08/13/09 12:32 Analyst: BEM

UJ

Acenaphthene	A	ND	0.21	1.0	µg, Total	1	08/14/09 22:29
Acenaphthylene	A	ND	0.22	1.0	µg, Total	1	08/14/09 22:29
Anthracene	A	ND	0.27	1.0	µg, Total	1	08/14/09 22:29
Benz[a]anthracene	A	ND	0.47	1.0	µg, Total	1	08/14/09 22:29
Benz[a]pyrene	A	ND	0.38	1.0	µg, Total	1	08/14/09 22:29
Benzo[b]fluoranthene	A	ND	0.44	1.0	µg, Total	1	08/14/09 22:29
Benzo[g,h,i]perylene	A	ND	0.72	1.0	µg, Total	1	08/14/09 22:29
Benzo[k]fluoranthene	A	ND	0.8	1.0	µg, Total	1	08/14/09 22:29
Chrysene	A	ND	0.57	1.0	µg, Total	1	08/14/09 22:29
Dibenz[a,h]anthracene	A	ND	0.54	1.0	µg, Total	1	08/14/09 22:29
Fluoranthene	A	ND	0.39	1.0	µg, Total	1	08/14/09 22:29
Fluorene	A	ND	0.25	1.0	µg, Total	1	08/14/09 22:29
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0	µg, Total	1	08/14/09 22:29
Naphthalene	A	ND	0.16	1.0	µg, Total	1	08/14/09 22:29
Phenanthrene	A	ND	0.27	1.0	µg, Total	1	08/14/09 22:29
Pyrene	A	ND	0.44	1.0	µg, Total	1	08/14/09 22:29
<i>Surr: Nitrobenzene-d5</i>	S	40.9		33.7-77.1	%REC	1	08/14/09 22:29
<i>Surr: 2-Fluorobiphenyl</i>	S	51.1		32.7-83.2	%REC	1	08/14/09 22:29
<i>Surr: Terphenyl-d14</i>	S	51.3		22.7-96.5	%REC	1	08/14/09 22:29

10/13/09

## ANALYTICAL RESULTS

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #6 TOX 2 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-06B  
**Collection Date:** 08/06/09 10:37  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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<b>SEMI-VOLATILE ORGANIC ANALYTE</b>		Method: TO-13MOD		Prep Date/Time: 08/13/09 12:32				Analyst: BEM
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	08/14/09 22:52
1,2-Dichlorobenzene	A	0.73	0.7	10	J	µg, Total	1	08/14/09 22:52
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	08/14/09 22:52
1,4-Dichlorobenzene	A	ND	0.9	10		µg, Total	1	08/14/09 22:52
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	08/14/09 22:52
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	08/14/09 22:52
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	08/14/09 22:52
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	08/14/09 22:52
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	08/14/09 22:52
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	08/14/09 22:52
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	08/14/09 22:52
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	08/14/09 22:52
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	08/14/09 22:52
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	08/14/09 22:52
2-Methylphenol	A	ND	0.7	10		µg, Total	1	08/14/09 22:52
2-Nitroaniline	A	ND	1	50		µg, Total	1	08/14/09 22:52
2-Nitrophenol	A	ND	1	10		µg, Total	1	08/14/09 22:52
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	08/14/09 22:52
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	08/14/09 22:52
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	08/14/09 22:52
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	08/14/09 22:52
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	08/14/09 22:52
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	08/14/09 22:52
4-Chloroaniline	A	ND	1	10		µg, Total	1	08/14/09 22:52
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	08/14/09 22:52
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	08/14/09 22:52
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	08/14/09 22:52
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	08/14/09 22:52
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	08/14/09 22:52
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	08/14/09 22:52
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10		µg, Total	1	08/14/09 22:52
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	08/14/09 22:52
Carbazole	A	ND	1.2	10		µg, Total	1	08/14/09 22:52
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	08/14/09 22:52
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	08/14/09 22:52
Dibenzofuran	A	ND	0.8	10		µg, Total	1	08/14/09 22:52
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	08/14/09 22:52
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	08/14/09 22:52
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	08/14/09 22:52

250 West 84th Drive, Merrillville, IN 46410 TEL.800.536.8379 TEL.219.769.8378 FAX.219.769.1664

10/13/09

**ANALYTICAL RESULTS**

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #6 TOX 2 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-06B  
**Collection Date:** 08/06/09 10:37  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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**SEMI-VOLATILE ORGANIC ANALYTE** Method: TO-13MOD Prep Date/Time: 08/13/09 12:32 Analyst: BEM

Hexachlorobutadiene	A	ND	0.9	10	µg, Total	1	08/14/09 22:52	
Hexachlorocyclopentadiene	A	ND	0.6	10	µg, Total	1	08/14/09 22:52	
Hexachloroethane	A	ND	0.9	10	µg, Total	1	08/14/09 22:52	
Isophorone	A	ND	1	10	µg, Total	1	08/14/09 22:52	
N-Nitrosodi-n-propylamine	A	ND	1	10	µg, Total	1	08/14/09 22:52	
N-Nitrosodiphenylamine	A	ND	0.7	10	µg, Total	1	08/14/09 22:52	
Nitrobenzene	A	ND	1	10	µg, Total	1	08/14/09 22:52	
Pentachlorophenol	A	ND	1.3	50	µg, Total	1	08/14/09 22:52	
Phenol	A	ND	0.4	10	µg, Total	1	08/14/09 22:52	
Surr: 2,4,6-Tribromophenol	S	48.3		40.5-97	%REC	1	08/14/09 22:52	
Surr: 2-Fluorobiphenyl	S	36.7		32.7-83.2	%REC	1	08/14/09 22:52	
Surr: 2-Fluorophenol	S	30.6		20.5-87.9	%REC	1	08/14/09 22:52	
Surr: Nitrobenzene-d5	S	30.6		33.7-77.1	S	%REC	1	08/14/09 22:52
Surr: Phenol-d5	S	32.3		32.7-80.9	S	%REC	1	08/14/09 22:52
Surr: Terphenyl-d14	S	40.6		22.7-96.5	%REC	1	08/14/09 22:52	

**PAHS BY GC/MS-SIM** Method: TO-13 Prep Date/Time: 08/13/09 12:32 Analyst: BEM

Acenaphthene	A	ND	0.21	1.0	µg, Total	1	08/14/09 22:52	
Acenaphthylene	A	ND	0.22	1.0	µg, Total	1	08/14/09 22:52	
Anthracene	A	ND	0.27	1.0	µg, Total	1	08/14/09 22:52	
Benzo[a]anthracene	A	ND	0.47	1.0	µg, Total	1	08/14/09 22:52	
Benzo[a]pyrene	A	ND	0.38	1.0	µg, Total	1	08/14/09 22:52	
Benzo[b]fluoranthene	A	ND	0.44	1.0	µg, Total	1	08/14/09 22:52	
Benzo[g,h,i]perylene	A	ND	0.72	1.0	µg, Total	1	08/14/09 22:52	
Benzo[k]fluoranthene	A	ND	0.8	1.0	µg, Total	1	08/14/09 22:52	
Chrysene	A	ND	0.57	1.0	µg, Total	1	08/14/09 22:52	
Dibenz[a,h]anthracene	A	ND	0.54	1.0	µg, Total	1	08/14/09 22:52	
Fluoranthene	A	ND	0.39	1.0	µg, Total	1	08/14/09 22:52	
Fluorene	A	ND	0.25	1.0	µg, Total	1	08/14/09 22:52	
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0	µg, Total	1	08/14/09 22:52	
Naphthalene	A	1.5	0.16	1.0	µg, Total	1	08/14/09 22:52	
Phenanthrene	A	ND	0.27	1.0	µg, Total	1	08/14/09 22:52	
Pyrene	A	ND	0.44	1.0	µg, Total	1	08/14/09 22:52	
Surr: Nitrobenzene-d5	S	30.6		33.7-77.1	S	%REC	1	08/14/09 22:52
Surr: 2-Fluorobiphenyl	S	36.7		32.7-83.2	%REC	1	08/14/09 22:52	
Surr: Terphenyl-d14	S	40.6		22.7-96.5	%REC	1	08/14/09 22:52	

## ANALYTICAL RESULTS

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #7 TOX 2 INFLUENT (DUP)  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-07B  
**Collection Date:** 08/06/09 11:10  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD	Prep Date/Time: 08/13/09 12:32 Analyst: BEM					
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	08/14/09 23:15
1,2-Dichlorobenzene	A	1.9	0.7	10	J	µg, Total	1	08/14/09 23:15
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	08/14/09 23:15
1,4-Dichlorobenzene	A	ND	0.9	10		µg, Total	1	08/14/09 23:15
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	08/14/09 23:15
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	08/14/09 23:15
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	08/14/09 23:15
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	08/14/09 23:15
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	08/14/09 23:15
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	08/14/09 23:15
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	08/14/09 23:15
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	08/14/09 23:15
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	08/14/09 23:15
2-Methylnaphthalene	A	0.94	0.9	10	J	µg, Total	1	08/14/09 23:15
2-Methylphenol	A	ND	0.7	10		µg, Total	1	08/14/09 23:15
2-Nitroaniline	A	ND	1	50		µg, Total	1	08/14/09 23:15
2-Nitrophenol	A	ND	1	10		µg, Total	1	08/14/09 23:15
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	08/14/09 23:15
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	08/14/09 23:15
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	08/14/09 23:15
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	08/14/09 23:15
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	08/14/09 23:15
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	08/14/09 23:15
4-Chloroaniline	A	ND	1	10		µg, Total	1	08/14/09 23:15
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	08/14/09 23:15
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	08/14/09 23:15
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	08/14/09 23:15
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	08/14/09 23:15
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	08/14/09 23:15
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	08/14/09 23:15
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10		µg, Total	1	08/14/09 23:15
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	08/14/09 23:15
Carbazole	A	ND	1.2	10		µg, Total	1	08/14/09 23:15
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	08/14/09 23:15
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	08/14/09 23:15
Dibenzofuran	A	ND	0.8	10		µg, Total	1	08/14/09 23:15
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	08/14/09 23:15
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	08/14/09 23:15
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	08/14/09 23:15

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10/13/beg

**ANALYTICAL RESULTS**

Date: Monday, August 24, 2009

<b>Client:</b>	MWH, Inc.	<b>Work Order / ID:</b>	ME0908264-07B
<b>Client Project:</b>	Aug 2009 - Monthly Air / ACS	<b>Collection Date:</b>	08/06/09 11:10
<b>Client Sample ID:</b>	#7 TOX 2 INFLUENT (DUP)	<b>Date Received:</b>	08/06/09 13:48
<b>Sample Description:</b>			
<b>Sample Matrix:</b>	Air		

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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**SEMI-VOLATILE ORGANIC ANALYTE Method: TO-13MOD**

Prep Date/Time: 08/13/09 12:32 Analyst: BEM

Hexachlorobutadiene	A	ND	0.9	10		µg, Total	1	08/14/09 23:15
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	08/14/09 23:15
Hexachloroethane	A	ND	0.9	10		µg, Total	1	08/14/09 23:15
Isophorone	A	2.2		10	J	µg, Total	1	08/14/09 23:15
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	08/14/09 23:15
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	08/14/09 23:15
Nitrobenzene	A	ND	1	10		µg, Total	1	08/14/09 23:15
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	08/14/09 23:15
Phenol	A	ND	0.4	10		µg, Total	1	08/14/09 23:15
<i>Surr: 2,4,6-Tribromophenol</i>	S	53.9		40.5-97		%REC	1	08/14/09 23:15
<i>Surr: 2-Fluorobiphenyl</i>	S	35.0		32.7-83.2		%REC	1	08/14/09 23:15
<i>Surr: 2-Fluorophenol</i>	S	25.9		20.5-87.9		%REC	1	08/14/09 23:15
<i>Surr: Nitrobenzene-d5</i>	S	24.0		33.7-77.1	S	%REC	1	08/14/09 23:15
<i>Surr: Phenol-d5</i>	S	26.5		32.7-80.9	S	%REC	1	08/14/09 23:15
<i>Surr: Terphenyl-d14</i>	S	46.0		22.7-96.5		%REC	1	08/14/09 23:15

**PAHS BY GC/MS-SIM Method: TO-13**

Prep Date/Time: 08/13/09 12:32 Analyst: BEM

Acenaphthene	A	ND	0.21	1.0		µg, Total	1	08/14/09 23:15
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	08/14/09 23:15
Anthracene	A	ND	0.27	1.0		µg, Total	1	08/14/09 23:15
Benzo[a]anthracene	A	ND	0.47	1.0		µg, Total	1	08/14/09 23:15
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	08/14/09 23:15
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	08/14/09 23:15
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	08/14/09 23:15
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	08/14/09 23:15
Chrysene	A	ND	0.57	1.0		µg, Total	1	08/14/09 23:15
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	08/14/09 23:15
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	08/14/09 23:15
Fluorene	A	ND	0.25	1.0		µg, Total	1	08/14/09 23:15
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	08/14/09 23:15
Naphthalene	A	3.7	0.16	1.0		µg, Total	1	08/14/09 23:15
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	08/14/09 23:15
Pyrene	A	ND	0.44	1.0		µg, Total	1	08/14/09 23:15
<i>Surr: Nitrobenzene-d5</i>	S	24.0		33.7-77.1	S	%REC	1	08/14/09 23:15
<i>Surr: 2-Fluorobiphenyl</i>	S	35.0		32.7-83.2		%REC	1	08/14/09 23:15
<i>Surr: Terphenyl-d14</i>	S	46.0		22.7-96.5		%REC	1	08/14/09 23:15

10/13/09

## ANALYTICAL RESULTS

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #8 TOX 2 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-08B  
**Collection Date:** 08/06/09 09:50  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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<b>SEMI-VOLATILE ORGANIC ANALYTE</b>		Method: TO-13MOD						
		Prep Date/Time: 08/13/09 12:32 Analyst: BEM						
		A	ND	0.9	10	µg, Total	1	08/14/09 23:39
1,2,4-Trichlorobenzene		A	ND	0.7	10	µg, Total	1	08/14/09 23:39
1,2-Dichlorobenzene		A	ND	0.8	10	µg, Total	1	08/14/09 23:39
1,3-Dichlorobenzene		A	ND	0.9	10	µg, Total	1	08/14/09 23:39
1,4-Dichlorobenzene		A	ND	1.5	10	µg, Total	1	08/14/09 23:39
2,4,5-Trichlorophenol		A	ND	0.9	10	µg, Total	1	08/14/09 23:39
2,4,6-Trichlorophenol		A	ND	0.7	10	µg, Total	1	08/14/09 23:39
2,4-Dichlorophenol		A	ND	0.8	10	µg, Total	1	08/14/09 23:39
2,4-Dimethylphenol		A	ND	9.4	50	µg, Total	1	08/14/09 23:39
2,4-Dinitrophenol		A	ND	0.8	10	µg, Total	1	08/14/09 23:39
2,4-Dinitrotoluene		A	ND	1.1	10	µg, Total	1	08/14/09 23:39
2-Chloronaphthalene		A	ND	0.9	10	µg, Total	1	08/14/09 23:39
2-Chlorophenol		A	ND	0.7	10	µg, Total	1	08/14/09 23:39
2-Methylnaphthalene		A	ND	0.9	10	µg, Total	1	08/14/09 23:39
2-Methylphenol		A	ND	0.7	10	µg, Total	1	08/14/09 23:39
2-Nitroaniline		A	ND	1	50	µg, Total	1	08/14/09 23:39
2-Nitrophenol		A	ND	1	10	µg, Total	1	08/14/09 23:39
3,3'-Dichlorobenzidine		A	ND	0.7	50	µg, Total	1	08/14/09 23:39
3-Nitroaniline		A	ND	1.3	50	µg, Total	1	08/14/09 23:39
3/4-Methylphenol		A	ND	0.8	10	µg, Total	1	08/14/09 23:39
4,6-Dinitro-2-methylphenol		A	ND	1.1	50	µg, Total	1	08/14/09 23:39
4-Bromophenyl phenyl ether		A	ND	0.9	10	µg, Total	1	08/14/09 23:39
4-Chloro-3-methylphenol		A	ND	1.2	20	µg, Total	1	08/14/09 23:39
4-Chloroaniline		A	ND	1	10	µg, Total	1	08/14/09 23:39
4-Chlorophenyl phenyl ether		A	ND	0.9	10	µg, Total	1	08/14/09 23:39
4-Nitroaniline		A	ND	1.7	50	µg, Total	1	08/14/09 23:39
4-Nitrophenol		A	ND	4.3	50	µg, Total	1	08/14/09 23:39
Bis(2-chloroethoxy)methane		A	ND	1	10	µg, Total	1	08/14/09 23:39
Bis(2-chloroethyl)ether		A	ND	0.9	10	µg, Total	1	08/14/09 23:39
Bis(2-chloroisopropyl)ether		A	ND	0.9	10	µg, Total	1	08/14/09 23:39
Bis(2-ethylhexyl)phthalate		A	ND	1.1	10	µg, Total	1	08/14/09 23:39
Butyl benzyl phthalate		A	ND	1	10	µg, Total	1	08/14/09 23:39
Carbazole		A	ND	1.2	10	µg, Total	1	08/14/09 23:39
Di-n-butyl phthalate		A	ND	1.2	10	µg, Total	1	08/14/09 23:39
Di-n-octyl phthalate		A	ND	1.1	10	µg, Total	1	08/14/09 23:39
Dibenzofuran		A	ND	0.8	10	µg, Total	1	08/14/09 23:39
Diethyl phthalate		A	ND	1.1	10	µg, Total	1	08/14/09 23:39
Dimethyl phthalate		A	ND	0.9	10	µg, Total	1	08/14/09 23:39
Hexachlorobenzene		A	ND	0.9	10	µg, Total	1	08/14/09 23:39

250 West 84th Drive, Merrillville, IN 46410 TEL.800.536.8379 TEL.219.769.8378 FAX.219.769.1664

10/13/09

**ANALYTICAL RESULTS**

Date: Monday, August 24, 2009

**Client:** MWH, Inc.  
**Client Project:** Aug 2009 - Monthly Air / ACS  
**Client Sample ID:** #8 TOX 2 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0908264-08B  
**Collection Date:** 08/06/09 09:50  
**Date Received:** 08/06/09 13:48

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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<b>SEMI-VOLATILE ORGANIC ANALYTE</b>		Method:	Prep Date/Time: 08/13/09 12:32 Analyst: BEM					
Hexachlorobutadiene	A	ND	0.9	10	µg, Total	1	08/14/09 23:39	
Hexachlorocyclopentadiene	A	ND	0.6	10	µg, Total	1	08/14/09 23:39	
Hexachloroethane	A	ND	0.9	10	µg, Total	1	08/14/09 23:39	
Isophorone	A	ND	1	10	µg, Total	1	08/14/09 23:39	
N-Nitrosodi-n-propylamine	A	ND	1	10	µg, Total	1	08/14/09 23:39	
N-Nitrosodiphenylamine	A	ND	0.7	10	µg, Total	1	08/14/09 23:39	
Nitrobenzene	A	ND	1	10	µg, Total	1	08/14/09 23:39	
Pentachlorophenol	A	ND	1.3	50	µg, Total	1	08/14/09 23:39	
Phenol	A	ND	0.4	10	µg, Total	1	08/14/09 23:39	
<i>Surr: 2,4,6-Tribromophenol</i>	S	53.3		40.5-97	%REC	1	08/14/09 23:39	
<i>Surr: 2-Fluorobiphenyl</i>	S	39.5		32.7-83.2	%REC	1	08/14/09 23:39	
<i>Surr: 2-Fluorophenol</i>	S	33.2		20.5-87.9	%REC	1	08/14/09 23:39	
<i>Surr: Nitrobenzene-d5</i>	S	32.2		33.7-77.1	S	%REC	1	08/14/09 23:39
<i>Surr: Phenol-d5</i>	S	31.2		32.7-80.9	S	%REC	1	08/14/09 23:39
<i>Surr: Terphenyl-d14</i>	S	44.9		22.7-96.5	%REC	1	08/14/09 23:39	

<b>PAHS BY GC/MS-SIM</b>		Method:	Prep Date/Time: 08/13/09 12:32 Analyst: BEM					
Acenaphthene	A	ND	0.21	1.0	µg, Total	1	08/14/09 23:39	
Acenaphthylene	A	ND	0.22	1.0	µg, Total	1	08/14/09 23:39	
Anthracene	A	ND	0.27	1.0	µg, Total	1	08/14/09 23:39	
Benzo[a]anthracene	A	ND	0.47	1.0	µg, Total	1	08/14/09 23:39	
Benzo[a]pyrene	A	ND	0.38	1.0	µg, Total	1	08/14/09 23:39	
Benzo[b]fluoranthene	A	ND	0.44	1.0	µg, Total	1	08/14/09 23:39	
Benzo[g,h,i]perylene	A	ND	0.72	1.0	µg, Total	1	08/14/09 23:39	
Benzo[k]fluoranthene	A	ND	0.8	1.0	µg, Total	1	08/14/09 23:39	
Chrysene	A	ND	0.57	1.0	µg, Total	1	08/14/09 23:39	
Dibenz[a,h]anthracene	A	ND	0.54	1.0	µg, Total	1	08/14/09 23:39	
Fluoranthene	A	ND	0.39	1.0	µg, Total	1	08/14/09 23:39	
Fluorene	A	ND	0.25	1.0	µg, Total	1	08/14/09 23:39	
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0	µg, Total	1	08/14/09 23:39	
Naphthalene	A	ND	0.16	1.0	µg, Total	1	08/14/09 23:39	
Phenanthrene	A	ND	0.27	1.0	µg, Total	1	08/14/09 23:39	
Pyrene	A	ND	0.44	1.0	µg, Total	1	08/14/09 23:39	
<i>Surr: Nitrobenzene-d5</i>	S	32.2		33.7-77.1	S	%REC	1	08/14/09 23:39
<i>Surr: 2-Fluorobiphenyl</i>	S	39.5		32.7-83.2	%REC	1	08/14/09 23:39	
<i>Surr: Terphenyl-d14</i>	S	44.9		22.7-96.5	%REC	1	08/14/09 23:39	

**September 10, 2009 Off-Gas Sample Laboratory Results**

## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #1 Offsite ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-01A  
**Collection Date:** 09/10/09 13:45  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS	Method:	TO-15			Prep Date/Time:		Analyst:	MAK
1,1,1-Trichloroethane	A	25000	450	1500	ppbv	,00	09/11/09 23:44	
1,1,2,2-Tetrachloroethane	A	13	13	30	J	ppbv	60	09/12/09 05:29
1,1,2-Trichloroethane	A	100	10	30	ppbv	60	09/12/09 05:29	
1,1-Dichloroethane	A	3000	42	150	ppbv	300	09/11/09 18:46	
1,1-Dichloroethene	A	72	10	30	ppbv	60	09/12/09 05:29	
1,2-Dichloroethane	A	380	10	30	ppbv	60	09/12/09 05:29	
1,2-Dichloropropane	A	120	8.4	30	ppbv	60	09/12/09 05:29	
2-Butanone	A	3800	36	590	ppbv	300	09/11/09 18:46	
2-Hexanone	A	ND	20	120	ppbv	60	09/12/09 05:29	
4-Methyl-2-Pentanone	A	1100	14	30	ppbv	60	09/12/09 05:29	
Acetone	A	5000	170	590	ppbv	300	09/11/09 18:46	
Benzene	A	11000	360	1500	ppbv	,00	09/11/09 23:44	
Bromodichloromethane	A	ND	9	30	ppbv	60	09/12/09 05:29	
Bromoform	A	ND	10	30	ppbv	60	09/12/09 05:29	
Bromomethane	A	ND	11	30	ppbv	60	09/12/09 05:29	
Carbon disulfide	A	ND	11	30	ppbv	60	09/12/09 05:29	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	09/12/09 05:29	
Chlorobenzene	A	ND	9.6	30	ppbv	60	09/12/09 05:29	
Chloroethane	A	100	10	30	ppbv	60	09/12/09 05:29	
Chloroform	A	2100	36	150	ppbv	300	09/11/09 18:46	
Chloromethane	A	ND	14	120	ppbv	60	09/12/09 05:29	
cis-1,2-Dichloroethene	A	1400	42	150	ppbv	300	09/11/09 18:46	J
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	09/12/09 05:29	
Dibromochloromethane	A	ND	10	30	ppbv	60	09/12/09 05:29	
Ethyl benzene	A	5300	53	150	ppbv	300	09/11/09 18:46	
m,p-Xylene	A	37000	900	3000	ppbv	,00	09/11/09 23:44	
Methylene chloride	A	36000	420	12000	ppbv	,00	09/11/09 23:44	J
o-Xylene	A	16000	510	1500	ppbv	,00	09/11/09 23:44	
Styrene	A	230	11	30	ppbv	60	09/12/09 05:29	
Tetrachloroethene	A	18000	510	1500	ppbv	,00	09/11/09 23:44	
Toluene	A	37000	830	2300	ppbv	,00	09/14/09 13:25	J
trans-1,2-Dichloroethene	A	33	19	30	ppbv	60	09/12/09 05:29	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	09/12/09 05:29	
Trichloroethene	A	18000	480	1500	ppbv	,00	09/11/09 23:44	
Vinyl chloride	A	190	9	30	ppbv	60	09/12/09 05:29	
Surr: 4-Bromofluorobenzene	S	109		77.7-127	%REC	60	09/12/09 05:29	

J-11/16/09

## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #2 SBPA ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-02A  
**Collection Date:** 09/10/09 13:55  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS		Method: TO-15	Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	17000	410	1400	ppbv	,000	09/12/09 00:27	J
1,1,2,2-Tetrachloroethane	A	13	13	30	J	60	09/12/09 06:12	
1,1,2-Trichloroethane	A	40	10	30	ppbv	60	09/12/09 06:12	
1,1-Dichloroethane	A	2400	42	150	ppbv	300	09/11/09 19:28	
1,1-Dichloroethene	A	95	10	30	ppbv	60	09/12/09 06:12	
1,2-Dichloroethane	A	130	10	30	ppbv	60	09/12/09 06:12	
1,2-Dichloropropane	A	150	8.4	30	ppbv	60	09/12/09 06:12	
2-Butanone	A	4400	36	600	ppbv	300	09/11/09 19:28	
2-Hexanone	A	ND	20	120	ppbv	60	09/12/09 06:12	
4-Methyl-2-Pentanone	A	1100	14	30	ppbv	60	09/12/09 06:12	
Acetone	A	17000	1500	5500	ppbv	,000	09/12/09 00:27	
Benzene	A	1900	36	150	ppbv	300	09/11/09 19:28	
Bromodichloromethane	A	ND	9	30	ppbv	60	09/12/09 06:12	
Bromoform	A	ND	10	30	ppbv	60	09/12/09 06:12	
Bromomethane	A	ND	11	30	ppbv	60	09/12/09 06:12	
Carbon disulfide	A	ND	11	30	ppbv	60	09/12/09 06:12	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	09/12/09 06:12	
Chlorobenzene	A	ND	9.6	30	ppbv	60	09/12/09 06:12	
Chloroethane	A	220	10	30	ppbv	60	09/12/09 06:12	
Chloroform	A	3000	36	150	ppbv	300	09/11/09 19:28	
Chloromethane	A	ND	14	120	ppbv	60	09/12/09 06:12	
cis-1,2-Dichloroethene	A	17000	380	1400	ppbv	,000	09/12/09 00:27	J
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	09/12/09 06:12	
Dibromochloromethane	A	ND	10	30	ppbv	60	09/12/09 06:12	
Ethyl benzene	A	4100	54	150	ppbv	300	09/11/09 19:28	
m,p-Xylene	A	23000	820	2700	ppbv	,000	09/12/09 00:27	
Methylene chloride	A	13000	380	11000	ppbv	,000	09/12/09 00:27	
o-Xylene	A	11000	460	1400	ppbv	,000	09/12/09 00:27	
Styrene	A	73	11	30	ppbv	60	09/12/09 06:12	
Tetrachloroethene	A	24000	460	1400	ppbv	,000	09/12/09 00:27	
Toluene	A	23000	490	1400	ppbv	,000	09/12/09 00:27	
trans-1,2-Dichloroethene	A	110	19	30	ppbv	60	09/12/09 06:12	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	09/12/09 06:12	
Trichloroethene	A	15000	440	1400	ppbv	,000	09/12/09 00:27	
Vinyl chloride	A	1200	9	30	ppbv	60	09/12/09 06:12	
Surr: 4-Bromofluorobenzene	S	102		77.7-127	%REC	60	09/12/09 06:12	

**ANALYTICAL RESULTS**

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #3 TOX 1 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-03A  
**Collection Date:** 09/10/09 13:58  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS		Method:	TO-15	Prep Date/Time:			Analyst: MAK	
1,1,1-Trichloroethane	A	19000	410	1400	ppbv	1,00	09/12/09 01:10	
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	09/12/09 06:55	
1,1,2-Trichloroethane	A	38	10	30	ppbv	60	09/12/09 06:55	
1,1-Dichloroethane	A	2700	42	150	ppbv	300	09/11/09 20:10	
1,1-Dichloroethene	A	100	10	30	ppbv	60	09/12/09 06:55	
1,2-Dichloroethane	A	130	10	30	ppbv	60	09/12/09 06:55	
1,2-Dichloropropane	A	140	8.4	30	ppbv	60	09/12/09 06:55	
2-Butanone	A	2600	36	600	ppbv	300	09/11/09 20:10	
2-Hexanone	A	ND	20	120	ppbv	60	09/12/09 06:55	
4-Methyl-2-Pentanone	A	170	14	30	ppbv	60	09/12/09 06:55	
Acetone	A	14000	1500	5500	ppbv	1,00	09/12/09 01:10	
Benzene	A	1900	36	150	ppbv	300	09/11/09 20:10	
Bromodichloromethane	A	ND	9	30	ppbv	60	09/12/09 06:55	
Bromoform	A	ND	10	30	ppbv	60	09/12/09 06:55	
Bromomethane	A	ND	11	30	ppbv	60	09/12/09 06:55	
Carbon disulfide	A	ND	11	30	ppbv	60	09/12/09 06:55	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	09/12/09 06:55	
Chlorobenzene	A	ND	9.6	30	ppbv	60	09/12/09 06:55	
Chloroethane	A	220	10	30	ppbv	60	09/12/09 06:55	
Chloroform	A	3100	36	150	ppbv	300	09/11/09 20:10	
Chloromethane	A	ND	14	120	ppbv	60	09/12/09 06:55	
cis-1,2-Dichloroethene	A	18000	380	1400	ppbv	1,00	09/12/09 01:10	J
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	09/12/09 06:55	
Dibromochloromethane	A	ND	10	30	ppbv	60	09/12/09 06:55	
Ethyl benzene	A	3500	54	150	ppbv	300	09/11/09 20:10	
m,p-Xylene	A	19000	820	2700	ppbv	1,00	09/12/09 01:10	
Methylene chloride	A	13000	380	11000	ppbv	1,00	09/12/09 01:10	
o-Xylene	A	5900	51	150	ppbv	300	09/11/09 20:10	
Styrene	A	57	11	30	ppbv	60	09/12/09 06:55	
Tetrachloroethene	A	23000	460	1400	ppbv	1,00	09/12/09 01:10	
Toluene	A	22000	490	1400	ppbv	1,00	09/12/09 01:10	
trans-1,2-Dichloroethene	A	110	19	30	ppbv	60	09/12/09 06:55	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	09/12/09 06:55	
Trichloroethene	A	16000	440	1400	ppbv	1,00	09/12/09 01:10	
Vinyl chloride	A	1300	45	150	ppbv	300	09/11/09 20:10	
Surr: 4-Bromofluorobenzene	S	101		77.7-127	%REC	60	09/12/09 06:55	

## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #4 TOX 1 INFLUENT(DUP)  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-04A  
**Collection Date:** 09/10/09 14:50  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS		Method: TO-15		Prep Date/Time:		Analyst: MAK		
1,1,1-Trichloroethane	A	21000	410	1400	ppbv	1,00	09/12/09 01:53	
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	09/12/09 07:38	
1,1,2-Trichloroethane	A	40	10	30	ppbv	60	09/12/09 07:38	
1,1-Dichloroethane	A	2800	42	150	ppbv	300	09/11/09 20:53	
1,1-Dichloroethene	A	97	10	30	ppbv	60	09/12/09 07:38	
1,2-Dichloroethane	A	140	10	30	ppbv	60	09/12/09 07:38	
1,2-Dichloropropane	A	170	8.4	30	ppbv	60	09/12/09 07:38	
2-Butanone	A	3400	36	600	ppbv	300	09/11/09 20:53	
2-Hexanone	A	ND	20	120	ppbv	60	09/12/09 07:38	
4-Methyl-2-Pentanone	A	1000	14	30	ppbv	60	09/12/09 07:38	
Acetone	A	16000	1500	5500	ppbv	1,00	09/12/09 01:53	
Benzene	A	2800	36	150	ppbv	300	09/11/09 20:53	
Bromodichloromethane	A	ND	9	30	ppbv	60	09/12/09 07:38	
Bromoform	A	ND	10	30	ppbv	60	09/12/09 07:38	
Bromomethane	A	ND	11	30	ppbv	60	09/12/09 07:38	
Carbon disulfide	A	ND	11	30	ppbv	60	09/12/09 07:38	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	09/12/09 07:38	
Chlorobenzene	A	ND	9.6	30	ppbv	60	09/12/09 07:38	
Chloroethane	A	210	10	30	ppbv	60	09/12/09 07:38	
Chloroform	A	3000	36	150	ppbv	300	09/11/09 20:53	
Chloromethane	A	ND	14	120	ppbv	60	09/12/09 07:38	J
cis-1,2-Dichloroethene	A	17000	380	1400	ppbv	1,00	09/12/09 01:53	
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	09/12/09 07:38	
Dibromochloromethane	A	ND	10	30	ppbv	60	09/12/09 07:38	
Ethyl benzene	A	4700	54	150	ppbv	300	09/11/09 20:53	
m,p-Xylene	A	28000	820	2700	ppbv	1,00	09/12/09 01:53	
Methylene chloride	A	11000	380	11000	ppbv	1,00	09/12/09 01:53	
o-Xylene	A	12000	460	1400	ppbv	1,00	09/12/09 01:53	
Styrene	A	68	11	30	ppbv	60	09/12/09 07:38	
Tetrachloroethene	A	25000	460	1400	ppbv	1,00	09/12/09 01:53	
Toluene	A	29000	490	1400	ppbv	1,00	09/12/09 01:53	
trans-1,2-Dichloroethene	A	100	19	30	ppbv	60	09/12/09 07:38	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	09/12/09 07:38	
Trichloroethene	A	18000	440	1400	ppbv	1,00	09/12/09 01:53	
Vinyl chloride	A	1200	9	30	ppbv	60	09/12/09 07:38	
Surr: 4-Bromofluorobenzene	S	104		77.7-127	%REC	60	09/12/09 07:38	

*Kyle Long*



## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #5 TOX 1 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-05A  
**Collection Date:** 09/10/09 14:02  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS		Method: TO-15		Prep Date/Time:		Analyst: MAK		
1,1,1-Trichloroethane	A	9.6	0.15	0.50	ppbv	1	09/12/09 03:20	
1,1,2,2-Tetrachloroethane	A	ND	0.22	0.50	ppbv	1	09/12/09 03:20	
1,1,2-Trichloroethane	A	ND	0.17	0.50	ppbv	1	09/12/09 03:20	
1,1-Dichloroethane	A	2.7	0.14	0.50	ppbv	1	09/12/09 03:20	
1,1-Dichloroethene	A	56	1.7	4.9	ppbv	10	09/11/09 16:37	
1,2-Dichloroethane	A	0.55	0.17	0.50	ppbv	1	09/12/09 03:20	
1,2-Dichloropropane	A	ND	0.14	0.50	ppbv	1	09/12/09 03:20	
2-Butanone	A	8.6	0.12	2.0	ppbv	1	09/12/09 03:20	
2-Hexanone	A	0.7	0.34	2.0	J	ppbv	1	09/12/09 03:20
4-Methyl-2-Pentanone	A	2.3	0.24	0.50	ppbv	1	09/12/09 03:20	
Acetone	A	34	5.5	20	ppbv	10	09/11/09 16:37	
Benzene	A	38	1.2	4.9	ppbv	10	09/11/09 16:37	
Bromodichloromethane	A	ND	0.15	0.50	ppbv	1	09/12/09 03:20	
Bromoform	A	ND	0.17	0.50	ppbv	1	09/12/09 03:20	
Bromomethane	A	ND	0.19	0.50	ppbv	1	09/12/09 03:20	
Carbon disulfide	A	ND	0.18	0.50	ppbv	1	09/12/09 03:20	
Carbon tetrachloride	A	ND	0.16	0.50	ppbv	1	09/12/09 03:20	
Chlorobenzene	A	0.65	0.16	0.50	ppbv	1	09/12/09 03:20	
Chloroethane	A	ND	0.17	0.50	ppbv	1	09/12/09 03:20	
Chloroform	A	6.0	0.12	0.50	ppbv	1	09/12/09 03:20	
Chloromethane	A	3.6	0.23	2.0	ppbv	1	09/12/09 03:20	
cis-1,2-Dichloroethene	A	22	1.4	4.9	ppbv	10	09/11/09 16:37	J
cis-1,3-Dichloropropene	A	ND	0.14	0.50	ppbv	1	09/12/09 03:20	
Dibromochloromethane	A	ND	0.17	0.50	ppbv	1	09/12/09 03:20	
Ethyl benzene	A	5.8	0.18	0.50	ppbv	1	09/12/09 03:20	
m,p-Xylene	A	18	0.3	1.0	ppbv	1	09/12/09 03:20	
Methylene chloride	A	22	1.4	39	J	ppbv	10	09/11/09 16:37
o-Xylene	A	7.8	0.17	0.50	ppbv	1	09/12/09 03:20	J
Styrene	A	12	0.19	0.50	ppbv	1	09/12/09 03:20	
Tetrachloroethene	A	79	1.7	4.9	ppbv	10	09/11/09 16:37	
Toluene	A	60	1.8	4.9	ppbv	10	09/11/09 16:37	
trans-1,2-Dichloroethene	A	10	0.31	0.50	ppbv	1	09/12/09 03:20	
trans-1,3-Dichloropropene	A	ND	0.12	0.50	ppbv	1	09/12/09 03:20	
Trichloroethene	A	56	1.6	4.9	ppbv	10	09/11/09 16:37	
Vinyl chloride	A	18	0.15	0.50	ppbv	1	09/12/09 03:20	
Surr: 4-Bromofluorobenzene	S	89.7		77.7-127	%REC	1	09/12/09 03:20	

## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #6 TOX 2 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-06A  
**Collection Date:** 09/10/09 14:20  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS		Method: TO-15	Prep Date/Time:			Analyst: MAK		
1,1,1-Trichloroethane	A	21000	410	1400	ppbv	,00	09/12/09 02:36	
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	09/12/09 08:22	
1,1,2-Trichloroethane	A	90	10	30	ppbv	60	09/12/09 08:22	
1,1-Dichloroethane	A	3200	42	150	ppbv	300	09/11/09 21:36	
1,1-Dichloroethene	A	71	10	30	ppbv	60	09/12/09 08:22	
1,2-Dichloroethane	A	340	10	30	ppbv	60	09/12/09 08:22	
1,2-Dichloropropane	A	110	8.4	30	ppbv	60	09/12/09 08:22	
2-Butanone	A	2800	36	590	ppbv	300	09/11/09 21:36	
2-Hexanone	A	ND	20	120	ppbv	60	09/12/09 08:22	
4-Methyl-2-Pentanone	A	1400	71	150	ppbv	300	09/11/09 21:36	
Acetone	A	4500	170	590	ppbv	300	09/11/09 21:36	
Benzene	A	5900	36	150	ppbv	300	09/11/09 21:36	
Bromodichloromethane	A	ND	9	30	ppbv	60	09/12/09 08:22	
Bromoform	A	ND	10	30	ppbv	60	09/12/09 08:22	
Bromomethane	A	ND	11	30	ppbv	60	09/12/09 08:22	
Carbon disulfide	A	ND	11	30	ppbv	60	09/12/09 08:22	
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	09/12/09 08:22	
Chlorobenzene	A	ND	9.6	30	ppbv	60	09/12/09 08:22	
Chloroethane	A	720	10	30	ppbv	60	09/12/09 08:22	
Chloroform	A	1600	36	150	ppbv	300	09/11/09 21:36	
Chloromethane	A	ND	14	120	ppbv	60	09/12/09 08:22	
cis-1,2-Dichloroethene	A	5800	42	150	ppbv	300	09/11/09 21:36	J
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	09/12/09 08:22	
Dibromochloromethane	A	ND	10	30	ppbv	60	09/12/09 08:22	
Ethyl benzene	A	5200	53	150	ppbv	300	09/11/09 21:36	
m,p-Xylene	A	33000	820	2700	ppbv	,00	09/12/09 02:36	
Methylene chloride	A	30000	380	11000	ppbv	,00	09/12/09 02:36	
o-Xylene	A	15000	460	1400	ppbv	,00	09/12/09 02:36	
Styrene	A	200	11	30	ppbv	60	09/12/09 08:22	
Tetrachloroethene	A	16000	460	1400	ppbv	,00	09/12/09 02:36	
Toluene	A	36000	900	2500	ppbv	,00	09/14/09 14:09	
trans-1,2-Dichloroethene	A	65	19	30	ppbv	60	09/12/09 08:22	
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	09/12/09 08:22	
Trichloroethene	A	15000	440	1400	ppbv	,00	09/12/09 02:36	
Vinyl chloride	A	1200	9	30	ppbv	60	09/12/09 08:22	
Surr: 4-Bromofluorobenzene	S	105		77.7-127	%REC	60	09/12/09 08:22	

KJ/KJ/KJ/KJ



## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

<b>Client:</b>	MWH, Inc.
<b>Client Project:</b>	Sept 2009 - Monthly Air / ACS
<b>Client Sample ID:</b>	#7 TOX 2 INFLUENT (DUP)
<b>Sample Description:</b>	
<b>Sample Matrix:</b>	Air
<b>Work Order / ID:</b>	ME0909489-07A
<b>Collection Date:</b>	09/10/09 15:20
<b>Date Received:</b>	09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS		Method: TO-15	Prep Date/Time:			Analyst: MAK	
1,1,1-Trichloroethane	A	22000	450	1500	ppbv	,00	09/11/09 23:02
1,1,2,2-Tetrachloroethane	A	ND	13	30	ppbv	60	09/18/09 17:05
1,1,2-Trichloroethane	A	98	10	30	ppbv	60	09/18/09 17:05
1,1-Dichloroethane	A	3100	42	150	ppbv	300	09/11/09 22:19
1,1-Dichloroethene	A	64	10	30	ppbv	60	09/18/09 17:05
1,2-Dichloroethane	A	410	10	30	ppbv	60	09/18/09 17:05
1,2-Dichloropropane	A	130	8.4	30	ppbv	60	09/18/09 17:05
2-Butanone	A	2900	36	590	ppbv	300	09/11/09 22:19
2-Hexanone	A	ND	20	120	ppbv	60	09/18/09 17:05
4-Methyl-2-Pentanone	A	1800	71	150	ppbv	300	09/11/09 22:19
Acetone	A	4500	170	590	ppbv	300	09/11/09 22:19
Benzene	A	5800	36	150	ppbv	300	09/11/09 22:19
Bromodichloromethane	A	ND	9	30	ppbv	60	09/18/09 17:05
Bromoform	A	ND	10	30	ppbv	60	09/18/09 17:05
Bromomethane	A	ND	11	30	ppbv	60	09/18/09 17:05
Carbon disulfide	A	ND	11	30	ppbv	60	09/18/09 17:05
Carbon tetrachloride	A	ND	9.6	30	ppbv	60	09/18/09 17:05
Chlorobenzene	A	ND	9.6	30	ppbv	60	09/18/09 17:05
Chloroethane	A	520	10	30	ppbv	60	09/18/09 17:05
Chloroform	A	1600	36	150	ppbv	300	09/11/09 22:19
Chloromethane	A	ND	14	120	ppbv	60	09/18/09 17:05
cis-1,2-Dichloroethene	A	5300	42	150	ppbv	300	09/11/09 22:19
cis-1,3-Dichloropropene	A	ND	8.4	30	ppbv	60	09/18/09 17:05
Dibromochloromethane	A	ND	10	30	ppbv	60	09/18/09 17:05
Ethyl benzene	A	5100	53	150	ppbv	300	09/11/09 22:19
m,p-Xylene	A	35000	900	3000	ppbv	,00	09/11/09 23:02
Methylene chloride	A	31000	420	12000	ppbv	,00	09/11/09 23:02
o-Xylene	A	16000	510	1500	ppbv	,00	09/11/09 23:02
Styrene	A	230	11	30	ppbv	60	09/18/09 17:05
Tetrachloroethene	A	17000	510	1500	ppbv	,00	09/11/09 23:02
Toluene	A	36000	900	2500	ppbv	,00	09/14/09 14:53
trans-1,2-Dichloroethene	A	40	19	30	ppbv	60	09/18/09 17:05
trans-1,3-Dichloropropene	A	ND	7.2	30	ppbv	60	09/18/09 17:05
Trichloroethene	A	16000	480	1500	ppbv	,00	09/11/09 23:02
Vinyl chloride	A	800	9	30	ppbv	60	09/18/09 17:05
Surr: 4-Bromofluorobenzene	S	124		77.7-127	%REC	60	09/18/09 17:05

## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #8 TOX 2 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-08A  
**Collection Date:** 09/10/09 13:40  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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TOXIC ORGANICS IN AIR BY GC/MS		Method: TO-15			Prep Date/Time:		Analyst: MAK	
1,1,1-Trichloroethane	A	630	6.8	23	ppbv	50	09/11/09 17:20	
1,1,2,2-Tetrachloroethane	A	ND	0.22	0.50	ppbv	1	09/12/09 04:46	
1,1,2-Trichloroethane	A	4.7	0.17	0.50	ppbv	1	09/12/09 04:46	
1,1-Dichloroethane	A	91	0.7	2.5	ppbv	5	09/16/09 19:16	
1,1-Dichloroethene	A	160	7.7	23	ppbv	50	09/11/09 17:20	
1,2-Dichloroethane	A	14	0.17	0.50	ppbv	1	09/12/09 04:46	
1,2-Dichloropropane	A	3.6	0.14	0.50	ppbv	1	09/12/09 04:46	
2-Butanone	A	88	0.6	10	ppbv	5	09/16/09 19:16	
2-Hexanone	A	1.6	0.34	2.0	J	ppbv	1	09/12/09 04:46
4-Methyl-2-Pentanone	A	33	1.2	2.5	ppbv	5	09/16/09 19:16	
Acetone	A	130	25	91	ppbv	50	09/11/09 17:20	
Benzene	A	480	5.5	23	ppbv	50	09/11/09 17:20	
Bromodichloromethane	A	ND	0.15	0.50	ppbv	1	09/12/09 04:46	
Bromoform	A	ND	0.17	0.50	ppbv	1	09/12/09 04:46	
Bromomethane	A	ND	0.19	0.50	ppbv	1	09/12/09 04:46	
Carbon disulfide	A	ND	0.18	0.50	ppbv	1	09/12/09 04:46	
Carbon tetrachloride	A	0.78	0.16	0.50	ppbv	1	09/12/09 04:46	
Chlorobenzene	A	6.6	0.16	0.50	ppbv	1	09/12/09 04:46	
Chloroethane	A	19	0.85	2.5	ppbv	5	09/16/09 19:16	
Chloroform	A	67	0.6	2.5	ppbv	5	09/16/09 19:16	
Chloromethane	A	13	0.23	2.0	ppbv	1	09/12/09 04:46	
cis-1,2-Dichloroethene	A	160	6.4	23	ppbv	50	09/11/09 17:20	
cis-1,3-Dichloropropene	A	0.38	0.14	0.50	J	ppbv	1	09/12/09 04:46
Dibromochloromethane	A	ND	0.17	0.50	ppbv	1	09/12/09 04:46	
Ethyl benzene	A	130	8.2	23	ppbv	50	09/11/09 17:20	
m,p-Xylene	A	460	14	46	ppbv	50	09/11/09 17:20	
Methylene chloride	A	500	6.4	180	ppbv	50	09/11/09 17:20	
o-Xylene	A	220	7.7	23	ppbv	50	09/11/09 17:20	
Styrene	A	56	0.95	2.5	ppbv	5	09/16/09 19:16	
Tetrachloroethene	A	470	7.7	23	ppbv	50	09/11/09 17:20	
Toluene	A	1500	16	46	ppbv	100	09/16/09 19:59	
trans-1,2-Dichloroethene	A	21	1.6	2.5	ppbv	5	09/16/09 19:16	
trans-1,3-Dichloropropene	A	0.32	0.12	0.50	J	ppbv	1	09/12/09 04:46
Trichloroethene	A	480	7.3	23	ppbv	50	09/11/09 17:20	
Vinyl chloride	A	69	0.75	2.5	ppbv	5	09/16/09 19:16	
Surr: 4-Bromofluorobenzene	S	101		77.7-127	%REC	1	09/12/09 04:46	

## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #1 Offsite ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-01B  
**Collection Date:** 09/10/09 13:45  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD		Prep Date/Time: 09/15/09 14:45				Analyst: BEM
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	09/22/09 22:56
1,2-Dichlorobenzene	A	ND	0.7	10		µg, Total	1	09/22/09 22:56
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	09/22/09 22:56
1,4-Dichlorobenzene	A	ND	0.9	10		µg, Total	1	09/22/09 22:56
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	09/22/09 22:56
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	09/22/09 22:56
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	09/22/09 22:56
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	09/22/09 22:56
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	09/22/09 22:56
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	09/22/09 22:56
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	09/22/09 22:56
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	09/22/09 22:56
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	09/22/09 22:56
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	09/22/09 22:56
2-Methylphenol	A	ND	0.7	10		µg, Total	1	09/22/09 22:56
2-Nitroaniline	A	ND	1	50		µg, Total	1	09/22/09 22:56
2-Nitrophenol	A	ND	1	10		µg, Total	1	09/22/09 22:56
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	09/22/09 22:56
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	09/22/09 22:56
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	09/22/09 22:56
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	09/22/09 22:56
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	09/22/09 22:56
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	09/22/09 22:56
4-Chloroaniline	A	ND	1	10		µg, Total	1	09/22/09 22:56
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	09/22/09 22:56
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	09/22/09 22:56
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	09/22/09 22:56
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	09/22/09 22:56
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	09/22/09 22:56
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	09/22/09 22:56
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10		µg, Total	1	09/22/09 22:56
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	09/22/09 22:56
Carbazole	A	ND	1.2	10		µg, Total	1	09/22/09 22:56
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	09/22/09 22:56
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	09/22/09 22:56
Dibenzofuran	A	ND	0.8	10		µg, Total	1	09/22/09 22:56
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	09/22/09 22:56
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	09/22/09 22:56
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	09/22/09 22:56

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10/16/09

## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #1 Offsite ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-01B  
**Collection Date:** 09/10/09 13:45  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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**SEMI-VOLATILE ORGANIC ANALYTE** Method: TO-13MOD Prep Date/Time: 09/15/09 14:45 Analyst: BEM

Hexachlorobutadiene	A	ND	0.9	10	µg, Total	1	09/22/09 22:56	UJ
Hexachlorocyclopentadiene	A	ND	0.6	10	µg, Total	1	09/22/09 22:56	UJ
Hexachloroethane	A	ND	0.9	10	µg, Total	1	09/22/09 22:56	UJ
Isophorone	A	ND	1	10	µg, Total	1	09/22/09 22:56	UJ
N-Nitrosodi-n-propylamine	A	ND	1	10	µg, Total	1	09/22/09 22:56	UJ
N-Nitrosodiphenylamine	A	ND	0.7	10	µg, Total	1	09/22/09 22:56	UJ
Nitrobenzene	A	ND	1	10	µg, Total	1	09/22/09 22:56	UJ
Pentachlorophenol	A	ND	1.3	50	µg, Total	1	09/22/09 22:56	UJ
Phenol	A	ND	0.4	10	µg, Total	1	09/22/09 22:56	UJ
<i>Surr: 2,4,6-Tribromophenol</i>	S	110		40.5-97	S	%REC	1	09/22/09 22:56
<i>Surr: 2-Fluorobiphenyl</i>	S	61.2		32.7-83.2		%REC	1	09/22/09 22:56
<i>Surr: 2-Fluorophenol</i>	S	47.0		20.5-87.9		%REC	1	09/22/09 22:56
<i>Surr: Nitrobenzene-d5</i>	S	52.4		33.7-77.1		%REC	1	09/22/09 22:56
<i>Surr: Phenol-d5</i>	S	45.8		32.7-80.9		%REC	1	09/22/09 22:56
<i>Surr: Terphenyl-d14</i>	S	67.2		22.7-96.5		%REC	1	09/22/09 22:56

**PAHS BY GC/MS-SIM** Method: TO-13 Prep Date/Time: 09/15/09 14:45 Analyst: BEM

Acenaphthene	A	ND	0.21	1.0	µg, Total	1	09/22/09 22:56	UJ
Acenaphthylene	A	ND	0.22	1.0	µg, Total	1	09/22/09 22:56	
Anthracene	A	ND	0.27	1.0	µg, Total	1	09/22/09 22:56	
Benzo[a]anthracene	A	ND	0.47	1.0	µg, Total	1	09/22/09 22:56	
Benzo[a]pyrene	A	ND	0.38	1.0	µg, Total	1	09/22/09 22:56	
Benzo[b]fluoranthene	A	ND	0.44	1.0	µg, Total	1	09/22/09 22:56	
Benzo[g,h,i]perylene	A	ND	0.72	1.0	µg, Total	1	09/22/09 22:56	
Benzo[k]fluoranthene	A	ND	0.8	1.0	µg, Total	1	09/22/09 22:56	
Chrysene	A	ND	0.57	1.0	µg, Total	1	09/22/09 22:56	
Dibenz[a,h]anthracene	A	ND	0.54	1.0	µg, Total	1	09/22/09 22:56	
Fluoranthene	A	ND	0.39	1.0	µg, Total	1	09/22/09 22:56	
Fluorene	A	ND	0.25	1.0	µg, Total	1	09/22/09 22:56	UJ
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0	µg, Total	1	09/22/09 22:56	
Naphthalene	A	2.9	0.16	1.0	µg, Total	1	09/22/09 22:56	
Phenanthrene	A	ND	0.27	1.0	µg, Total	1	09/22/09 22:56	
Pyrene	A	ND	0.44	1.0	µg, Total	1	09/22/09 22:56	
<i>Surr: Nitrobenzene-d5</i>	S	52.4		33.7-77.1		%REC	1	09/22/09 22:56
<i>Surr: 2-Fluorobiphenyl</i>	S	61.2		32.7-83.2		%REC	1	09/22/09 22:56
<i>Surr: Terphenyl-d14</i>	S	67.2		22.7-96.5		%REC	1	09/22/09 22:56

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## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #2 SBPA ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-02B  
**Collection Date:** 09/10/09 13:55  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD						
								Prep Date/Time: 09/15/09 14:45 Analyst: BEM
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	09/22/09 23:17
1,2-Dichlorobenzene	A	2.8	0.7	10	J	µg, Total	1	09/22/09 23:17
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	09/22/09 23:17
1,4-Dichlorobenzene	A	ND	0.9	10		µg, Total	1	09/22/09 23:17
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	09/22/09 23:17
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	09/22/09 23:17
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	09/22/09 23:17
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	09/22/09 23:17
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	09/22/09 23:17
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	09/22/09 23:17
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	09/22/09 23:17
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	09/22/09 23:17
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	09/22/09 23:17
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	09/22/09 23:17
2-Methylphenol	A	ND	0.7	10		µg, Total	1	09/22/09 23:17
2-Nitroaniline	A	ND	1	50		µg, Total	1	09/22/09 23:17
2-Nitrophenol	A	ND	1	10		µg, Total	1	09/22/09 23:17
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	09/22/09 23:17
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	09/22/09 23:17
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	09/22/09 23:17
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	09/22/09 23:17
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	09/22/09 23:17
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	09/22/09 23:17
4-Chloroaniline	A	ND	1	10		µg, Total	1	09/22/09 23:17
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	09/22/09 23:17
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	09/22/09 23:17
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	09/22/09 23:17
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	09/22/09 23:17
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	09/22/09 23:17
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	09/22/09 23:17
Bis(2-ethylhexyl)phthalate	A	2.5	1.1	10	J	µg, Total	1	09/22/09 23:17
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	09/22/09 23:17
Carbazole	A	ND	1.2	10		µg, Total	1	09/22/09 23:17
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	09/22/09 23:17
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	09/22/09 23:17
Dibenzofuran	A	ND	0.8	10		µg, Total	1	09/22/09 23:17
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	09/22/09 23:17
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	09/22/09 23:17
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	09/22/09 23:17

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## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #2 SBPA ISVE  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-02B  
**Collection Date:** 09/10/09 13:55  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD		Prep Date/Time: 09/15/09 14:45				Analyst: BEM
Hexachlorobutadiene	A	ND	0.9	10		µg, Total	1	09/22/09 23:17
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	09/22/09 23:17
Hexachloroethane	A	ND	0.9	10		µg, Total	1	09/22/09 23:17
Isophorone	A	ND	1	10		µg, Total	1	09/22/09 23:17
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	09/22/09 23:17
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	09/22/09 23:17
Nitrobenzene	A	ND	1	10		µg, Total	1	09/22/09 23:17
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	09/22/09 23:17
Phenol	A	ND	0.4	10		µg, Total	1	09/22/09 23:17
Surr: 2,4,6-Tribromophenol	S	98.1		40.5-97	S	%REC	1	09/22/09 23:17
Surr: 2-Fluorobiphenyl	S	47.9		32.7-83.2		%REC	1	09/22/09 23:17
Surr: 2-Fluorophenol	S	38.9		20.5-87.9		%REC	1	09/22/09 23:17
Surr: Nitrobenzene-d5	S	41.3		33.7-77.1		%REC	1	09/22/09 23:17
Surr: Phenol-d5	S	40.8		32.7-80.9		%REC	1	09/22/09 23:17
Surr: Terphenyl-d14	S	62.7		22.7-96.5		%REC	1	09/22/09 23:17

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PAHS BY GC/MS-SIM		Method: TO-13		Prep Date/Time: 09/15/09 14:45				Analyst: BEM
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	09/22/09 23:17
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	09/22/09 23:17
Anthracene	A	ND	0.27	1.0		µg, Total	1	09/22/09 23:17
Benzo[a]anthracene	A	ND	0.47	1.0		µg, Total	1	09/22/09 23:17
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	09/22/09 23:17
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	09/22/09 23:17
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	09/22/09 23:17
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	09/22/09 23:17
Chrysene	A	ND	0.57	1.0		µg, Total	1	09/22/09 23:17
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	09/22/09 23:17
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	09/22/09 23:17
Fluorene	A	ND	0.25	1.0		µg, Total	1	09/22/09 23:17
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	09/22/09 23:17
Naphthalene	A	1.5	0.16	1.0		µg, Total	1	09/22/09 23:17
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	09/22/09 23:17
Pyrene	A	ND	0.44	1.0		µg, Total	1	09/22/09 23:17
Surr: Nitrobenzene-d5	S	41.3		33.7-77.1		%REC	1	09/22/09 23:17
Surr: 2-Fluorobiphenyl	S	47.9		32.7-83.2		%REC	1	09/22/09 23:17
Surr: Terphenyl-d14	S	62.7		22.7-96.5		%REC	1	09/22/09 23:17

12/16/09

## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #3 TOX 1 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-03B  
**Collection Date:** 09/10/09 13:58  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD		Prep Date/Time: 09/15/09 14:45 Analyst: BEM				
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	09/22/09 23:38
1,2-Dichlorobenzene	A	3	0.7	10	J	µg, Total	1	09/22/09 23:38
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	09/22/09 23:38
1,4-Dichlorobenzene	A	ND	0.9	10		µg, Total	1	09/22/09 23:38
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	09/22/09 23:38
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	09/22/09 23:38
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	09/22/09 23:38
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	09/22/09 23:38
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	09/22/09 23:38
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	09/22/09 23:38
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	09/22/09 23:38
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	09/22/09 23:38
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	09/22/09 23:38
2-Methylnaphthalene	A	1.5	0.9	10	J	µg, Total	1	09/22/09 23:38
2-Methylphenol	A	ND	0.7	10		µg, Total	1	09/22/09 23:38
2-Nitroaniline	A	ND	1	50		µg, Total	1	09/22/09 23:38
2-Nitrophenol	A	ND	1	10		µg, Total	1	09/22/09 23:38
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	09/22/09 23:38
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	09/22/09 23:38
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	09/22/09 23:38
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	09/22/09 23:38
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	09/22/09 23:38
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	09/22/09 23:38
4-Chloroaniline	A	ND	1	10		µg, Total	1	09/22/09 23:38
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	09/22/09 23:38
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	09/22/09 23:38
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	09/22/09 23:38
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	09/22/09 23:38
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	09/22/09 23:38
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	09/22/09 23:38
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10		µg, Total	1	09/22/09 23:38
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	09/22/09 23:38
Carbazole	A	ND	1.2	10		µg, Total	1	09/22/09 23:38
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	09/22/09 23:38
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	09/22/09 23:38
Dibenzofuran	A	ND	0.8	10		µg, Total	1	09/22/09 23:38
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	09/22/09 23:38
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	09/22/09 23:38
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	09/22/09 23:38

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12/16/09



## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #3 TOX 1 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-03B  
**Collection Date:** 09/10/09 13:58  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD						
						Prep Date/Time: 09/15/09 14:45	Analyst: BEM	
Hexachlorobutadiene	A	ND	0.9	10		µg, Total	1	09/22/09 23:38
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	09/22/09 23:38
Hexachloroethane	A	ND	0.9	10		µg, Total	1	09/22/09 23:38
Isophorone	A	1.7	1	10	J	µg, Total	1	09/22/09 23:38
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	09/22/09 23:38
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	09/22/09 23:38
Nitrobenzene	A	ND	1	10		µg, Total	1	09/22/09 23:38
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	09/22/09 23:38
Phenol	A	ND	0.4	10		µg, Total	1	09/22/09 23:38
Surr: 2,4,6-Tribromophenol	S	146		40.5-97	S	%REC	1	09/22/09 23:38
Surr: 2-Fluorobiphenyl	S	71.8		32.7-83.2		%REC	1	09/22/09 23:38
Surr: 2-Fluorophenol	S	49.0		20.5-87.9		%REC	1	09/22/09 23:38
Surr: Nitrobenzene-d5	S	55.7		33.7-77.1		%REC	1	09/22/09 23:38
Surr: Phenol-d5	S	50.2		32.7-80.9		%REC	1	09/22/09 23:38
Surr: Terphenyl-d14	S	88.1		22.7-96.5		%REC	1	09/22/09 23:38

PAHS BY GC/MS-SIM		Method: TO-13						
						Prep Date/Time: 09/15/09 14:45	Analyst: BEM	
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	09/22/09 23:38
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	09/22/09 23:38
Anthracene	A	ND	0.27	1.0		µg, Total	1	09/22/09 23:38
Benzo[a]anthracene	A	ND	0.47	1.0		µg, Total	1	09/22/09 23:38
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	09/22/09 23:38
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	09/22/09 23:38
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	09/22/09 23:38
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	09/22/09 23:38
Chrysene	A	ND	0.57	1.0		µg, Total	1	09/22/09 23:38
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	09/22/09 23:38
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	09/22/09 23:38
Fluorene	A	ND	0.25	1.0		µg, Total	1	09/22/09 23:38
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	09/22/09 23:38
Naphthalene	A	2.6	0.16	1.0		µg, Total	1	09/22/09 23:38
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	09/22/09 23:38
Pyrene	A	ND	0.44	1.0		µg, Total	1	09/22/09 23:38
Surr: Nitrobenzene-d5	S	55.7		33.7-77.1		%REC	1	09/22/09 23:38
Surr: 2-Fluorobiphenyl	S	71.8		32.7-83.2		%REC	1	09/22/09 23:38
Surr: Terphenyl-d14	S	88.1		22.7-96.5		%REC	1	09/22/09 23:38

10/16/09



## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #4 TOX 1 INFLUENT(DUP)  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-04B  
**Collection Date:** 09/10/09 14:50  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE Method: TO-13MOD		Prep Date/Time: 09/15/09 14:45 Analyst: BEM						
1,2,4-Trichlorobenzene	A	ND	0.9	10	µg, Total	1	09/22/09 23:58	✓
1,2-Dichlorobenzene	A	ND	0.7	10	µg, Total	1	09/22/09 23:58	
1,3-Dichlorobenzene	A	ND	0.8	10	µg, Total	1	09/22/09 23:58	
1,4-Dichlorobenzene	A	ND	0.9	10	µg, Total	1	09/22/09 23:58	
2,4,5-Trichlorophenol	A	ND	1.5	10	µg, Total	1	09/22/09 23:58	
2,4,6-Trichlorophenol	A	ND	0.9	10	µg, Total	1	09/22/09 23:58	
2,4-Dichlorophenol	A	ND	0.7	10	µg, Total	1	09/22/09 23:58	
2,4-Dimethylphenol	A	ND	0.8	10	µg, Total	1	09/22/09 23:58	
2,4-Dinitrophenol	A	ND	9.4	50	µg, Total	1	09/22/09 23:58	
2,4-Dinitrotoluene	A	ND	0.8	10	µg, Total	1	09/22/09 23:58	
2,6-Dinitrotoluene	A	ND	1.1	10	µg, Total	1	09/22/09 23:58	
2-Chloronaphthalene	A	ND	0.9	10	µg, Total	1	09/22/09 23:58	
2-Chlorophenol	A	ND	0.7	10	µg, Total	1	09/22/09 23:58	
2-Methylnaphthalene	A	ND	0.9	10	µg, Total	1	09/22/09 23:58	
2-Methylphenol	A	ND	0.7	10	µg, Total	1	09/22/09 23:58	
2-Nitroaniline	A	ND	1	50	µg, Total	1	09/22/09 23:58	
2-Nitrophenol	A	ND	1	10	µg, Total	1	09/22/09 23:58	
3,3'-Dichlorobenzidine	A	ND	0.7	50	µg, Total	1	09/22/09 23:58	
3-Nitroaniline	A	ND	1.3	50	µg, Total	1	09/22/09 23:58	
3/4-Methylphenol	A	ND	0.8	10	µg, Total	1	09/22/09 23:58	
4,6-Dinitro-2-methylphenol	A	ND	1.1	50	µg, Total	1	09/22/09 23:58	
4-Bromophenyl phenyl ether	A	ND	0.9	10	µg, Total	1	09/22/09 23:58	
4-Chloro-3-methylphenol	A	ND	1.2	20	µg, Total	1	09/22/09 23:58	
4-Chloroaniline	A	ND	1	10	µg, Total	1	09/22/09 23:58	
4-Chlorophenyl phenyl ether	A	ND	0.9	10	µg, Total	1	09/22/09 23:58	
4-Nitroaniline	A	ND	1.7	50	µg, Total	1	09/22/09 23:58	
4-Nitrophenol	A	ND	4.3	50	µg, Total	1	09/22/09 23:58	
Bis(2-chloroethoxy)methane	A	ND	1	10	µg, Total	1	09/22/09 23:58	
Bis(2-chloroethyl)ether	A	ND	0.9	10	µg, Total	1	09/22/09 23:58	
Bis(2-chloroisopropyl)ether	A	ND	0.9	10	µg, Total	1	09/22/09 23:58	
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10	µg, Total	1	09/22/09 23:58	
Butyl benzyl phthalate	A	ND	1	10	µg, Total	1	09/22/09 23:58	
Carbazole	A	ND	1.2	10	µg, Total	1	09/22/09 23:58	
Di-n-butyl phthalate	A	ND	1.2	10	µg, Total	1	09/22/09 23:58	
Di-n-octyl phthalate	A	ND	1.1	10	µg, Total	1	09/22/09 23:58	
Dibenzofuran	A	ND	0.8	10	µg, Total	1	09/22/09 23:58	
Diethyl phthalate	A	ND	1.1	10	µg, Total	1	09/22/09 23:58	
Dimethyl phthalate	A	ND	0.9	10	µg, Total	1	09/22/09 23:58	
Hexachlorobenzene	A	ND	0.9	10	µg, Total	1	09/22/09 23:58	

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12/16/09

## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

<b>Client:</b>	MWH, Inc.	<b>Work Order / ID:</b>	ME0909489-04B
<b>Client Project:</b>	Sept 2009 - Monthly Air / ACS	<b>Collection Date:</b>	09/10/09 14:50
<b>Client Sample ID:</b>	#4 TOX 1 INFLUENT(DUP)	<b>Date Received:</b>	09/10/09 16:40
<b>Sample Description:</b>			
<b>Sample Matrix:</b>	Air		

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD	Prep Date/Time: 09/15/09 14:45 Analyst: BEM					
Hexachlorobutadiene	A	ND	0.9	10	µg, Total	1	09/22/09 23:58	
Hexachlorocyclopentadiene	A	ND	0.6	10	µg, Total	1	09/22/09 23:58	
Hexachloroethane	A	ND	0.9	10	µg, Total	1	09/22/09 23:58	
Isophorone	A	ND	1	10	µg, Total	1	09/22/09 23:58	
N-Nitrosodi-n-propylamine	A	ND	1	10	µg, Total	1	09/22/09 23:58	
N-Nitrosodiphenylamine	A	ND	0.7	10	µg, Total	1	09/22/09 23:58	
Nitrobenzene	A	ND	1	10	µg, Total	1	09/22/09 23:58	
Pentachlorophenol	A	ND	1.3	50	µg, Total	1	09/22/09 23:58	
Phenol	A	ND	0.4	10	µg, Total	1	09/22/09 23:58	
Surr: 2,4,6-Tribromophenol	S	106		40.5-97	S	%REC	1	09/22/09 23:58
Surr: 2-Fluorobiphenyl	S	80.3		32.7-83.2		%REC	1	09/22/09 23:58
Surr: 2-Fluorophenol	S	58.5		20.5-87.9		%REC	1	09/22/09 23:58
Surr: Nitrobenzene-d5	S	67.4		33.7-77.1		%REC	1	09/22/09 23:58
Surr: Phenol-d5	S	57.6		32.7-80.9		%REC	1	09/22/09 23:58
Surr: Terphenyl-d14	S	58.5		22.7-96.5		%REC	1	09/22/09 23:58

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PAHS BY GC/MS-SIM		Method: TO-13	Prep Date/Time: 09/15/09 14:45 Analyst: BEM					
Acenaphthene	A	ND	0.21	1.0	µg, Total	1	09/22/09 23:58	
Acenaphthylene	A	ND	0.22	1.0	µg, Total	1	09/22/09 23:58	
Anthracene	A	ND	0.27	1.0	µg, Total	1	09/22/09 23:58	
Benzo[a]anthracene	A	ND	0.47	1.0	µg, Total	1	09/22/09 23:58	
Benzo[a]pyrene	A	ND	0.38	1.0	µg, Total	1	09/22/09 23:58	
Benzo[b]fluoranthene	A	ND	0.44	1.0	µg, Total	1	09/22/09 23:58	
Benzo[g,h,i]perylene	A	ND	0.72	1.0	µg, Total	1	09/22/09 23:58	
Benzo[k]fluoranthene	A	ND	0.8	1.0	µg, Total	1	09/22/09 23:58	
Chrysene	A	ND	0.57	1.0	µg, Total	1	09/22/09 23:58	
Dibenz[a,h]anthracene	A	ND	0.54	1.0	µg, Total	1	09/22/09 23:58	
Fluoranthene	A	ND	0.39	1.0	µg, Total	1	09/22/09 23:58	
Fluorene	A	ND	0.25	1.0	µg, Total	1	09/22/09 23:58	
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0	µg, Total	1	09/22/09 23:58	
Naphthalene	A	ND	0.16	1.0	µg, Total	1	09/22/09 23:58	
Phenanthrene	A	ND	0.27	1.0	µg, Total	1	09/22/09 23:58	
Pyrene	A	ND	0.44	1.0	µg, Total	1	09/22/09 23:58	
Surr: Nitrobenzene-d5	S	67.4		33.7-77.1		%REC	1	09/22/09 23:58
Surr: 2-Fluorobiphenyl	S	80.3		32.7-83.2		%REC	1	09/22/09 23:58
Surr: Terphenyl-d14	S	58.5		22.7-96.5		%REC	1	09/22/09 23:58

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## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #5 TOX 1 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-05B  
**Collection Date:** 09/10/09 14:02  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD							Prep Date/Time: 09/15/09 14:45 Analyst: BEM	
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	09/23/09 00:19		
1,2-Dichlorobenzene	A	ND	0.7	10		µg, Total	1	09/23/09 00:19		
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	09/23/09 00:19		
1,4-Dichlorobenzene	A	1.5	0.9	10	J	µg, Total	1	09/23/09 00:19		
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	09/23/09 00:19		
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	09/23/09 00:19		
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	09/23/09 00:19		
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	09/23/09 00:19		
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	09/23/09 00:19		
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	09/23/09 00:19		
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	09/23/09 00:19		
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	09/23/09 00:19		
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	09/23/09 00:19		
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	09/23/09 00:19		
2-Methylphenol	A	ND	0.7	10		µg, Total	1	09/23/09 00:19		
2-Nitroaniline	A	ND	1	50		µg, Total	1	09/23/09 00:19		
2-Nitrophenol	A	ND	1	10		µg, Total	1	09/23/09 00:19		
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	09/23/09 00:19		
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	09/23/09 00:19		
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	09/23/09 00:19		
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	09/23/09 00:19		
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	09/23/09 00:19		
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	09/23/09 00:19		
4-Chloroaniline	A	ND	1	10		µg, Total	1	09/23/09 00:19		
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	09/23/09 00:19		WT
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	09/23/09 00:19		
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	09/23/09 00:19		
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	09/23/09 00:19		
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	09/23/09 00:19		
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	09/23/09 00:19		
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10		µg, Total	1	09/23/09 00:19		
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	09/23/09 00:19		
Carbazole	A	ND	1.2	10		µg, Total	1	09/23/09 00:19		
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	09/23/09 00:19		
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	09/23/09 00:19		
Dibenzofuran	A	ND	0.8	10		µg, Total	1	09/23/09 00:19		
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	09/23/09 00:19		
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	09/23/09 00:19		
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	09/23/09 00:19		

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## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #5 TOX 1 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-05B  
**Collection Date:** 09/10/09 14:02  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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**SEMI-VOLATILE ORGANIC ANALYTE** Method: TO-13MOD Prep Date/Time: 09/15/09 14:45 Analyst: BEM

Hexachlorobutadiene	A	ND	0.9	10	µg, Total	1	09/23/09 00:19	UJ
Hexachlorocyclopentadiene	A	ND	0.6	10	µg, Total	1	09/23/09 00:19	
Hexachloroethane	A	ND	0.9	10	µg, Total	1	09/23/09 00:19	
Isophorone	A	ND	1	10	µg, Total	1	09/23/09 00:19	
N-Nitrosodi-n-propylamine	A	ND	1	10	µg, Total	1	09/23/09 00:19	UJ
N-Nitrosodiphenylamine	A	ND	0.7	10	µg, Total	1	09/23/09 00:19	
Nitrobenzene	A	ND	1	10	µg, Total	1	09/23/09 00:19	
Pentachlorophenol	A	ND	1.3	50	µg, Total	1	09/23/09 00:19	
Phenol	A	ND	0.4	10	µg, Total	1	09/23/09 00:19	
<i>Surr: 2,4,6-Tribromophenol</i>	S	123		40.5-97	S	%REC	1	09/23/09 00:19
<i>Surr: 2-Fluorobiphenyl</i>	S	68.6		32.7-83.2		%REC	1	09/23/09 00:19
<i>Surr: 2-Fluorophenol</i>	S	57.4		20.5-87.9		%REC	1	09/23/09 00:19
<i>Surr: Nitrobenzene-d5</i>	S	54.3		33.7-77.1		%REC	1	09/23/09 00:19
<i>Surr: Phenol-d5</i>	S	54.7		32.7-80.9		%REC	1	09/23/09 00:19
<i>Surr: Terphenyl-d14</i>	S	74.5		22.7-96.5		%REC	1	09/23/09 00:19

**PAHS BY GC/MS-SIM** Method: TO-13 Prep Date/Time: 09/15/09 14:45 Analyst: BEM

Acenaphthene	A	ND	0.21	1.0	µg, Total	1	09/23/09 00:19	
Acenaphthylene	A	ND	0.22	1.0	µg, Total	1	09/23/09 00:19	
Anthracene	A	ND	0.27	1.0	µg, Total	1	09/23/09 00:19	
Benzo[a]anthracene	A	ND	0.47	1.0	µg, Total	1	09/23/09 00:19	
Benzo[a]pyrene	A	ND	0.38	1.0	µg, Total	1	09/23/09 00:19	
Benzo[b]fluoranthene	A	ND	0.44	1.0	µg, Total	1	09/23/09 00:19	
Benzo[g,h,i]perylene	A	ND	0.72	1.0	µg, Total	1	09/23/09 00:19	
Benzo[k]fluoranthene	A	ND	0.8	1.0	µg, Total	1	09/23/09 00:19	
Chrysene	A	ND	0.57	1.0	µg, Total	1	09/23/09 00:19	
Dibenz[a,h]anthracene	A	ND	0.54	1.0	µg, Total	1	09/23/09 00:19	
Fluoranthene	A	ND	0.39	1.0	µg, Total	1	09/23/09 00:19	
Fluorene	A	ND	0.25	1.0	µg, Total	1	09/23/09 00:19	
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0	µg, Total	1	09/23/09 00:19	
Naphthalene	A	ND	0.16	1.0	µg, Total	1	09/23/09 00:19	
Phenanthrene	A	ND	0.27	1.0	µg, Total	1	09/23/09 00:19	
Pyrene	A	ND	0.44	1.0	µg, Total	1	09/23/09 00:19	
<i>Surr: Nitrobenzene-d5</i>	S	54.3		33.7-77.1		%REC	1	09/23/09 00:19
<i>Surr: 2-Fluorobiphenyl</i>	S	68.6		32.7-83.2		%REC	1	09/23/09 00:19
<i>Surr: Terphenyl-d14</i>	S	74.5		22.7-96.5		%REC	1	09/23/09 00:19

## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #6 TOX 2 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-06B  
**Collection Date:** 09/10/09 14:20  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD						
					Prep Date/Time: 09/15/09 14:45	Analyst: BEM		
1,2,4-Trichlorobenzene	A	ND	0.9	10	µg, Total	1	09/23/09 00:40	
1,2-Dichlorobenzene	A	ND	0.7	10	µg, Total	1	09/23/09 00:40	
1,3-Dichlorobenzene	A	ND	0.8	10	µg, Total	1	09/23/09 00:40	
1,4-Dichlorobenzene	A	ND	0.9	10	µg, Total	1	09/23/09 00:40	
2,4,5-Trichlorophenol	A	ND	1.5	10	µg, Total	1	09/23/09 00:40	
2,4,6-Trichlorophenol	A	ND	0.9	10	µg, Total	1	09/23/09 00:40	
2,4-Dichlorophenol	A	ND	0.7	10	µg, Total	1	09/23/09 00:40	
2,4-Dimethylphenol	A	ND	0.8	10	µg, Total	1	09/23/09 00:40	
2,4-Dinitrophenol	A	ND	9.4	50	µg, Total	1	09/23/09 00:40	
2,4-Dinitrotoluene	A	ND	0.8	10	µg, Total	1	09/23/09 00:40	
2,6-Dinitrotoluene	A	ND	1.1	10	µg, Total	1	09/23/09 00:40	
2-Chloronaphthalene	A	ND	0.9	10	µg, Total	1	09/23/09 00:40	
2-Chlorophenol	A	ND	0.7	10	µg, Total	1	09/23/09 00:40	
2-Methylnaphthalene	A	0.91	0.9	10	J µg, Total	1	09/23/09 00:40	
2-Methylphenol	A	ND	0.7	10	µg, Total	1	09/23/09 00:40	
2-Nitroaniline	A	ND	1	50	µg, Total	1	09/23/09 00:40	
2-Nitrophenol	A	ND	1	10	µg, Total	1	09/23/09 00:40	
3,3'-Dichlorobenzidine	A	ND	0.7	50	µg, Total	1	09/23/09 00:40	
3-Nitroaniline	A	ND	1.3	50	µg, Total	1	09/23/09 00:40	
3/4-Methylphenol	A	ND	0.8	10	µg, Total	1	09/23/09 00:40	
4,6-Dinitro-2-methylphenol	A	ND	1.1	50	µg, Total	1	09/23/09 00:40	
4-Bromophenyl phenyl ether	A	ND	0.9	10	µg, Total	1	09/23/09 00:40	
4-Chloro-3-methylphenol	A	ND	1.2	20	µg, Total	1	09/23/09 00:40	
4-Chloroaniline	A	ND	1	10	µg, Total	1	09/23/09 00:40	
4-Chlorophenyl phenyl ether	A	ND	0.9	10	µg, Total	1	09/23/09 00:40	WT
4-Nitroaniline	A	ND	1.7	50	µg, Total	1	09/23/09 00:40	
4-Nitrophenol	A	ND	4.3	50	µg, Total	1	09/23/09 00:40	
Bis(2-chloroethoxy)methane	A	ND	1	10	µg, Total	1	09/23/09 00:40	
Bis(2-chloroethyl)ether	A	ND	0.9	10	µg, Total	1	09/23/09 00:40	
Bis(2-chloroisopropyl)ether	A	ND	0.9	10	µg, Total	1	09/23/09 00:40	
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10	µg, Total	1	09/23/09 00:40	
Butyl benzyl phthalate	A	ND	1	10	µg, Total	1	09/23/09 00:40	
Carbazole	A	ND	1.2	10	µg, Total	1	09/23/09 00:40	
Di-n-butyl phthalate	A	ND	1.2	10	µg, Total	1	09/23/09 00:40	
Di-n-octyl phthalate	A	ND	1.1	10	µg, Total	1	09/23/09 00:40	
Dibenzofuran	A	ND	0.8	10	µg, Total	1	09/23/09 00:40	
Diethyl phthalate	A	ND	1.1	10	µg, Total	1	09/23/09 00:40	
Dimethyl phthalate	A	ND	0.9	10	µg, Total	1	09/23/09 00:40	
Hexachlorobenzene	A	ND	0.9	10	µg, Total	1	09/23/09 00:40	

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## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #6 TOX 2 INFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-06B  
**Collection Date:** 09/10/09 14:20  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD						
						Prep Date/Time: 09/15/09 14:45	Analyst: BEM	
Hexachlorobutadiene	A	ND	0.9	10		µg, Total	1	09/23/09 00:40
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	09/23/09 00:40
Hexachloroethane	A	ND	0.9	10		µg, Total	1	09/23/09 00:40
Isophorone	A	2.9	1	10	J	µg, Total	1	09/23/09 00:40
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	09/23/09 00:40
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	09/23/09 00:40
Nitrobenzene	A	ND	1	10		µg, Total	1	09/23/09 00:40
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	09/23/09 00:40
Phenol	A	ND	0.4	10		µg, Total	1	09/23/09 00:40
Surr: 2,4,6-Tribromophenol	S	113		40.5-97	S	%REC	1	09/23/09 00:40
Surr: 2-Fluorobiphenyl	S	66.2		32.7-83.2		%REC	1	09/23/09 00:40
Surr: 2-Fluorophenol	S	51.7		20.5-87.9		%REC	1	09/23/09 00:40
Surr: Nitrobenzene-d5	S	58.5		33.7-77.1		%REC	1	09/23/09 00:40
Surr: Phenol-d5	S	50.4		32.7-80.9		%REC	1	09/23/09 00:40
Surr: Terphenyl-d14	S	74.0		22.7-96.5		%REC	1	09/23/09 00:40

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PAHS BY GC/MS-SIM		Method: TO-13						
						Prep Date/Time: 09/15/09 14:45	Analyst: BEM	
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	09/23/09 00:40
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	09/23/09 00:40
Anthracene	A	ND	0.27	1.0		µg, Total	1	09/23/09 00:40
Benzo[a]anthracene	A	ND	0.47	1.0		µg, Total	1	09/23/09 00:40
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	09/23/09 00:40
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	09/23/09 00:40
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	09/23/09 00:40
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	09/23/09 00:40
Chrysene	A	ND	0.57	1.0		µg, Total	1	09/23/09 00:40
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	09/23/09 00:40
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	09/23/09 00:40
Fluorene	A	ND	0.25	1.0		µg, Total	1	09/23/09 00:40
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	09/23/09 00:40
Naphthalene	A	3.5	0.16	1.0		µg, Total	1	09/23/09 00:40
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	09/23/09 00:40
Pyrene	A	ND	0.44	1.0		µg, Total	1	09/23/09 00:40
Surr: Nitrobenzene-d5	S	58.5		33.7-77.1		%REC	1	09/23/09 00:40
Surr: 2-Fluorobiphenyl	S	66.2		32.7-83.2		%REC	1	09/23/09 00:40
Surr: Terphenyl-d14	S	74.0		22.7-96.5		%REC	1	09/23/09 00:40

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9/21/09 log

## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #7 TOX 2 INFLUENT (DUP)  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-07B  
**Collection Date:** 09/10/09 15:20  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD		Prep Date/Time: 09/15/09 14:45				Analyst: BEM
1,2,4-Trichlorobenzene	A	ND	0.9	10		µg, Total	1	09/23/09 01:01
1,2-Dichlorobenzene	A	ND	0.7	10		µg, Total	1	09/23/09 01:01
1,3-Dichlorobenzene	A	ND	0.8	10		µg, Total	1	09/23/09 01:01
1,4-Dichlorobenzene	A	ND	0.9	10		µg, Total	1	09/23/09 01:01
2,4,5-Trichlorophenol	A	ND	1.5	10		µg, Total	1	09/23/09 01:01
2,4,6-Trichlorophenol	A	ND	0.9	10		µg, Total	1	09/23/09 01:01
2,4-Dichlorophenol	A	ND	0.7	10		µg, Total	1	09/23/09 01:01
2,4-Dimethylphenol	A	ND	0.8	10		µg, Total	1	09/23/09 01:01
2,4-Dinitrophenol	A	ND	9.4	50		µg, Total	1	09/23/09 01:01
2,4-Dinitrotoluene	A	ND	0.8	10		µg, Total	1	09/23/09 01:01
2,6-Dinitrotoluene	A	ND	1.1	10		µg, Total	1	09/23/09 01:01
2-Chloronaphthalene	A	ND	0.9	10		µg, Total	1	09/23/09 01:01
2-Chlorophenol	A	ND	0.7	10		µg, Total	1	09/23/09 01:01
2-Methylnaphthalene	A	ND	0.9	10		µg, Total	1	09/23/09 01:01
2-Methylphenol	A	ND	0.7	10		µg, Total	1	09/23/09 01:01
2-Nitroaniline	A	ND	1	50		µg, Total	1	09/23/09 01:01
2-Nitrophenol	A	ND	1	10		µg, Total	1	09/23/09 01:01
3,3'-Dichlorobenzidine	A	ND	0.7	50		µg, Total	1	09/23/09 01:01
3-Nitroaniline	A	ND	1.3	50		µg, Total	1	09/23/09 01:01
3/4-Methylphenol	A	ND	0.8	10		µg, Total	1	09/23/09 01:01
4,6-Dinitro-2-methylphenol	A	ND	1.1	50		µg, Total	1	09/23/09 01:01
4-Bromophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	09/23/09 01:01
4-Chloro-3-methylphenol	A	ND	1.2	20		µg, Total	1	09/23/09 01:01
4-Chloroaniline	A	ND	1	10		µg, Total	1	09/23/09 01:01
4-Chlorophenyl phenyl ether	A	ND	0.9	10		µg, Total	1	09/23/09 01:01
4-Nitroaniline	A	ND	1.7	50		µg, Total	1	09/23/09 01:01
4-Nitrophenol	A	ND	4.3	50		µg, Total	1	09/23/09 01:01
Bis(2-chloroethoxy)methane	A	ND	1	10		µg, Total	1	09/23/09 01:01
Bis(2-chloroethyl)ether	A	ND	0.9	10		µg, Total	1	09/23/09 01:01
Bis(2-chloroisopropyl)ether	A	ND	0.9	10		µg, Total	1	09/23/09 01:01
Bis(2-ethylhexyl)phthalate	A	1.5	1.1	10	J	µg, Total	1	09/23/09 01:01
Butyl benzyl phthalate	A	ND	1	10		µg, Total	1	09/23/09 01:01
Carbazole	A	ND	1.2	10		µg, Total	1	09/23/09 01:01
Di-n-butyl phthalate	A	ND	1.2	10		µg, Total	1	09/23/09 01:01
Di-n-octyl phthalate	A	ND	1.1	10		µg, Total	1	09/23/09 01:01
Dibenzofuran	A	ND	0.8	10		µg, Total	1	09/23/09 01:01
Diethyl phthalate	A	ND	1.1	10		µg, Total	1	09/23/09 01:01
Dimethyl phthalate	A	ND	0.9	10		µg, Total	1	09/23/09 01:01
Hexachlorobenzene	A	ND	0.9	10		µg, Total	1	09/23/09 01:01

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F116 log



## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #7 TOX 2 INFLUENT (DUP)  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-07B  
**Collection Date:** 09/10/09 15:20  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE		Method: TO-13MOD						
								Prep Date/Time: 09/15/09 14:45 Analyst: BEM
Hexachlorobutadiene	A	ND	0.9	10		µg, Total	1	09/23/09 01:01
Hexachlorocyclopentadiene	A	ND	0.6	10		µg, Total	1	09/23/09 01:01
Hexachloroethane	A	ND	0.9	10		µg, Total	1	09/23/09 01:01
Isophorone	A	ND	1	10		µg, Total	1	09/23/09 01:01
N-Nitrosodi-n-propylamine	A	ND	1	10		µg, Total	1	09/23/09 01:01
N-Nitrosodiphenylamine	A	ND	0.7	10		µg, Total	1	09/23/09 01:01
Nitrobenzene	A	ND	1	10		µg, Total	1	09/23/09 01:01
Pentachlorophenol	A	ND	1.3	50		µg, Total	1	09/23/09 01:01
Phenol	A	ND	0.4	10		µg, Total	1	09/23/09 01:01
Surr: 2,4,6-Tribromophenol	S	121		40.5-97	S	%REC	1	09/23/09 01:01
Surr: 2-Fluorobiphenyl	S	63.4		32.7-83.2		%REC	1	09/23/09 01:01
Surr: 2-Fluorophenol	S	47.7		20.5-87.9	.	%REC	1	09/23/09 01:01
Surr: Nitrobenzene-d5	S	63.6		33.7-77.1		%REC	1	09/23/09 01:01
Surr: Phenol-d5	S	49.7		32.7-80.9		%REC	1	09/23/09 01:01
Surr: Terphenyl-d14	S	76.9		22.7-96.5		%REC	1	09/23/09 01:01

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PAHS BY GC/MS-SIM		Method: TO-13						
								Prep Date/Time: 09/15/09 14:45 Analyst: BEM
Acenaphthene	A	ND	0.21	1.0		µg, Total	1	09/23/09 01:01
Acenaphthylene	A	ND	0.22	1.0		µg, Total	1	09/23/09 01:01
Anthracene	A	ND	0.27	1.0		µg, Total	1	09/23/09 01:01
Benzo[a]anthracene	A	ND	0.47	1.0		µg, Total	1	09/23/09 01:01
Benzo[a]pyrene	A	ND	0.38	1.0		µg, Total	1	09/23/09 01:01
Benzo[b]fluoranthene	A	ND	0.44	1.0		µg, Total	1	09/23/09 01:01
Benzo[g,h,i]perylene	A	ND	0.72	1.0		µg, Total	1	09/23/09 01:01
Benzo[k]fluoranthene	A	ND	0.8	1.0		µg, Total	1	09/23/09 01:01
Chrysene	A	ND	0.57	1.0		µg, Total	1	09/23/09 01:01
Dibenz[a,h]anthracene	A	ND	0.54	1.0		µg, Total	1	09/23/09 01:01
Fluoranthene	A	ND	0.39	1.0		µg, Total	1	09/23/09 01:01
Fluorene	A	ND	0.25	1.0		µg, Total	1	09/23/09 01:01
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0		µg, Total	1	09/23/09 01:01
Naphthalene	A	1.5	0.16	1.0		µg, Total	1	09/23/09 01:01
Phenanthrene	A	ND	0.27	1.0		µg, Total	1	09/23/09 01:01
Pyrene	A	ND	0.44	1.0		µg, Total	1	09/23/09 01:01
Surr: Nitrobenzene-d5	S	63.6		33.7-77.1		%REC	1	09/23/09 01:01
Surr: 2-Fluorobiphenyl	S	63.4		32.7-83.2		%REC	1	09/23/09 01:01
Surr: Terphenyl-d14	S	76.9		22.7-96.5		%REC	1	09/23/09 01:01

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9/21/09



## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #8 TOX 2 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-08B  
**Collection Date:** 09/10/09 13:40  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method:	TO-13MOD	Prep Date/Time: 09/15/09 14:45 Analyst: BEM					
1,2,4-Trichlorobenzene	A	ND	0.9	10	µg, Total	1	09/23/09 01:21	
1,2-Dichlorobenzene	A	ND	0.7	10	µg, Total	1	09/23/09 01:21	
1,3-Dichlorobenzene	A	ND	0.8	10	µg, Total	1	09/23/09 01:21	
1,4-Dichlorobenzene	A	ND	0.9	10	µg, Total	1	09/23/09 01:21	
2,4,5-Trichlorophenol	A	ND	1.5	10	µg, Total	1	09/23/09 01:21	
2,4,6-Trichlorophenol	A	ND	0.9	10	µg, Total	1	09/23/09 01:21	
2,4-Dichlorophenol	A	ND	0.7	10	µg, Total	1	09/23/09 01:21	
2,4-Dimethylphenol	A	ND	0.8	10	µg, Total	1	09/23/09 01:21	
2,4-Dinitrophenol	A	ND	9.4	50	µg, Total	1	09/23/09 01:21	
2,4-Dinitrotoluene	A	ND	0.8	10	µg, Total	1	09/23/09 01:21	
2,6-Dinitrotoluene	A	ND	1.1	10	µg, Total	1	09/23/09 01:21	
2-Chloronaphthalene	A	ND	0.9	10	µg, Total	1	09/23/09 01:21	
2-Chlorophenol	A	ND	0.7	10	µg, Total	1	09/23/09 01:21	
2-Methylnaphthalene	A	ND	0.9	10	µg, Total	1	09/23/09 01:21	
2-Methylphenol	A	ND	0.7	10	µg, Total	1	09/23/09 01:21	
2-Nitroaniline	A	ND	1	50	µg, Total	1	09/23/09 01:21	
2-Nitrophenol	A	ND	1	10	µg, Total	1	09/23/09 01:21	
3,3'-Dichlorobenzidine	A	ND	0.7	50	µg, Total	1	09/23/09 01:21	
3-Nitroaniline	A	ND	1.3	50	µg, Total	1	09/23/09 01:21	
3/4-Methylphenol	A	ND	0.8	10	µg, Total	1	09/23/09 01:21	
4,6-Dinitro-2-methylphenol	A	ND	1.1	50	µg, Total	1	09/23/09 01:21	
4-Bromophenyl phenyl ether	A	ND	0.9	10	µg, Total	1	09/23/09 01:21	
4-Chloro-3-methylphenol	A	ND	1.2	20	µg, Total	1	09/23/09 01:21	
4-Chloroaniline	A	ND	1	10	µg, Total	1	09/23/09 01:21	
4-Chlorophenyl phenyl ether	A	ND	0.9	10	µg, Total	1	09/23/09 01:21	
4-Nitroaniline	A	ND	1.7	50	µg, Total	1	09/23/09 01:21	
4-Nitrophenol	A	ND	4.3	50	µg, Total	1	09/23/09 01:21	
Bis(2-chloroethoxy)methane	A	ND	1	10	µg, Total	1	09/23/09 01:21	
Bis(2-chloroethyl)ether	A	ND	0.9	10	µg, Total	1	09/23/09 01:21	
Bis(2-chloroisopropyl)ether	A	ND	0.9	10	µg, Total	1	09/23/09 01:21	
Bis(2-ethylhexyl)phthalate	A	ND	1.1	10	µg, Total	1	09/23/09 01:21	
Butyl benzyl phthalate	A	ND	1	10	µg, Total	1	09/23/09 01:21	
Carbazole	A	ND	1.2	10	µg, Total	1	09/23/09 01:21	
Di-n-butyl phthalate	A	ND	1.2	10	µg, Total	1	09/23/09 01:21	
Di-n-octyl phthalate	A	ND	1.1	10	µg, Total	1	09/23/09 01:21	
Dibenzofuran	A	ND	0.8	10	µg, Total	1	09/23/09 01:21	
Diethyl phthalate	A	ND	1.1	10	µg, Total	1	09/23/09 01:21	
Dimethyl phthalate	A	ND	0.9	10	µg, Total	1	09/23/09 01:21	
Hexachlorobenzene	A	ND	0.9	10	µg, Total	1	09/23/09 01:21	

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## ANALYTICAL RESULTS

Date: Friday, October 02, 2009

**Client:** MWH, Inc.  
**Client Project:** Sept 2009 - Monthly Air / ACS  
**Client Sample ID:** #8 TOX 2 EFFLUENT  
**Sample Description:**  
**Sample Matrix:** Air

**Work Order / ID:** ME0909489-08B  
**Collection Date:** 09/10/09 13:40  
**Date Received:** 09/10/09 16:40

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
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SEMI-VOLATILE ORGANIC ANALYTE	Method: TO-13MOD		Prep Date/Time: 09/15/09 14:45				Analyst: BEM	
Hexachlorobutadiene	A	ND	0.9	10	µg, Total	1	09/23/09 01:21	UJ
Hexachlorocyclopentadiene	A	ND	0.6	10	µg, Total	1	09/23/09 01:21	
Hexachloroethane	A	ND	0.9	10	µg, Total	1	09/23/09 01:21	
Isophorone	A	ND	1	10	µg, Total	1	09/23/09 01:21	
N-Nitrosodi-n-propylamine	A	ND	1	10	µg, Total	1	09/23/09 01:21	UJ
N-Nitrosodiphenylamine	A	ND	0.7	10	µg, Total	1	09/23/09 01:21	
Nitrobenzene	A	ND	1	10	µg, Total	1	09/23/09 01:21	
Pentachlorophenol	A	ND	1.3	50	µg, Total	1	09/23/09 01:21	
Phenol	A	ND	0.4	10	µg, Total	1	09/23/09 01:21	
Surr: 2,4,6-Tribromophenol	S	75.9		40.5-97	%REC	1	09/23/09 01:21	
Surr: 2-Fluorobiphenyl	S	50.1		32.7-83.2	%REC	1	09/23/09 01:21	UJ
Surr: 2-Fluorophenol	S	43.0		20.5-87.9	%REC	1	09/23/09 01:21	
Surr: Nitrobenzene-d5	S	39.8		33.7-77.1	%REC	1	09/23/09 01:21	
Surr: Phenol-d5	S	45.5		32.7-80.9	%REC	1	09/23/09 01:21	
Surr: Terphenyl-d14	S	57.2		22.7-96.5	%REC	1	09/23/09 01:21	

PAHS BY GC/MS-SIM	Method: TO-13		Prep Date/Time: 09/15/09 14:45				Analyst: BEM	
Acenaphthene	A	ND	0.21	1.0	µg, Total	1	09/23/09 01:21	
Acenaphthylene	A	ND	0.22	1.0	µg, Total	1	09/23/09 01:21	
Anthracene	A	ND	0.27	1.0	µg, Total	1	09/23/09 01:21	
Benzo[a]anthracene	A	ND	0.47	1.0	µg, Total	1	09/23/09 01:21	
Benzo[a]pyrene	A	ND	0.38	1.0	µg, Total	1	09/23/09 01:21	
Benzo[b]fluoranthene	A	ND	0.44	1.0	µg, Total	1	09/23/09 01:21	
Benzo[g,h,i]perylene	A	ND	0.72	1.0	µg, Total	1	09/23/09 01:21	
Benzo[k]fluoranthene	A	ND	0.8	1.0	µg, Total	1	09/23/09 01:21	
Chrysene	A	ND	0.57	1.0	µg, Total	1	09/23/09 01:21	
Dibenz[a,h]anthracene	A	ND	0.54	1.0	µg, Total	1	09/23/09 01:21	
Fluoranthene	A	ND	0.39	1.0	µg, Total	1	09/23/09 01:21	
Fluorene	A	ND	0.25	1.0	µg, Total	1	09/23/09 01:21	
Indeno[1,2,3cd]pyrene	A	ND	0.56	1.0	µg, Total	1	09/23/09 01:21	
Naphthalene	A	ND	0.16	1.0	µg, Total	1	09/23/09 01:21	
Phenanthrene	A	ND	0.27	1.0	µg, Total	1	09/23/09 01:21	
Pyrene	A	ND	0.44	1.0	µg, Total	1	09/23/09 01:21	
Surr: Nitrobenzene-d5	S	39.8		33.7-77.1	%REC	1	09/23/09 01:21	
Surr: 2-Fluorobiphenyl	S	50.1		32.7-83.2	%REC	1	09/23/09 01:21	
Surr: Terphenyl-d14	S	57.2		22.7-96.5	%REC	1	09/23/09 01:21	

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10/16/09